



## Agenda Item (VIII-B-1)

|                    |   |
|--------------------|---|
| Meeting            | 10/16/2012 - Regular  |
| Agenda Item        | Committee - Teaching and Learning (VIII-B-1)                                    |
| Subject            | Report on Accountability for Community Colleges 2012                            |
| College/District   | District  |
| Funding            | N A   |
| Recommended Action | It is recommended that the Board of Trustees accept the findings of the report. |

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### Background Narrative:

Presented for the Board's review and consideration is the Accountability Reporting for Community Colleges report issued by the California Community Colleges Chancellor's Office in March 2012. The report's objectives are to make policymakers, local college officials, and elected boards aware of overall system and college-specific performance in seven areas of effort, and to inform the public about overall system performance.

Included in this report are the Riverside Community College District colleges' individual institutional responses to the report's findings. During the three most recent time periods under examination, RCCD was able to maintain or increase its level of performance on each of the seven accountability measures.

Prepared By: Ray Maghroori, Provost/Vice Chancellor, Educational Services  
David Torres, Dean, Institutional Research

### Attachments:

[Accountability Report](#)  
[Accountability Report Presentation](#)

# Accountability Reporting for the Community Colleges, 2012:

## Executive Summary

**Background:** Accountability Reporting for the Community Colleges (or ARCC) is a set of performance indicators for the California Community Colleges (CCC). ARCC meets a legislative requirement that resulted from Assembly Bill 1417. As required by the Legislature, the CCC System Office produces this annual report and disseminates it so that every college can share it with its local board of trustees. The report's objective is to inform policymakers, local college officials, and elected boards of overall system performance and individual college performance in seven specific areas of effort.

A team of statewide college researchers, a panel of nationally recognized researchers on college performance, a statewide technical advisory workgroup, and staff at the Chancellor's Office created the ARCC. This is the sixth annual ARCC report and the present report was distributed to state government policymakers and the public at large in March 2012.

**Structure:** The report is structured in two sections: system wide performance and individual college performance. The report's first section covers overall system performance over time for a variety of indicators. The systemwide indicators are organized into the broad categories of:

**student progress and achievement (in the areas of)**

- degree and certificate attainment
- transfer rates
- vocational, occupational and workforce development
- participation rates

**and pre-collegiate improvement (in the areas of)**

- basic skills
- English as a Second Language.

Systemwide, these indicators are reported as counts (and where appropriate, as percentages) of transfer, degrees and certificates, as income changes as a result of occupational training, and as counts (and percentages) of students graduating from the University of California and from the California State University who began their educational careers at community colleges.

These indicators are derived from many data sources, including public and private institutions of higher learning, the California Employment Development Department, the National Student Clearinghouse, and the Chancellor's Office database, among others. They are not simply aggregations of all the individual college performances. Given the breadth and complexity of these measures, this body of information is not currently available for each individual college, so this data is presented for the entire California Community Colleges system.

The second section of the report is dedicated to the individual college-level indicators. For the seven individual measures in the present study, each college was given data reflecting three sequential years so that changes and trends could be identified. Each set of college-level indicators was divided into Student Progress and Achievement (with four indicators) and Pre-Collegiate Improvement (with three indicators).

The 2012 report marks the first time ARCC has published separate reports for each of RCCD's colleges. Since most of the indicators are calculated over multiyear time periods, the majority of the measures presented appear to exist only for RCC. However, this is misleading as the RCC rates herein actually reflect district information, which is how the information was collected in previous years. Therefore, for indicators where only RCC data exists, the reader should interpret these findings as reflecting district level (RCCD) outcomes. [In graphics, these will be designated with the label "RCC(D)".]

### **College Level Indicators for Riverside Community College District:**

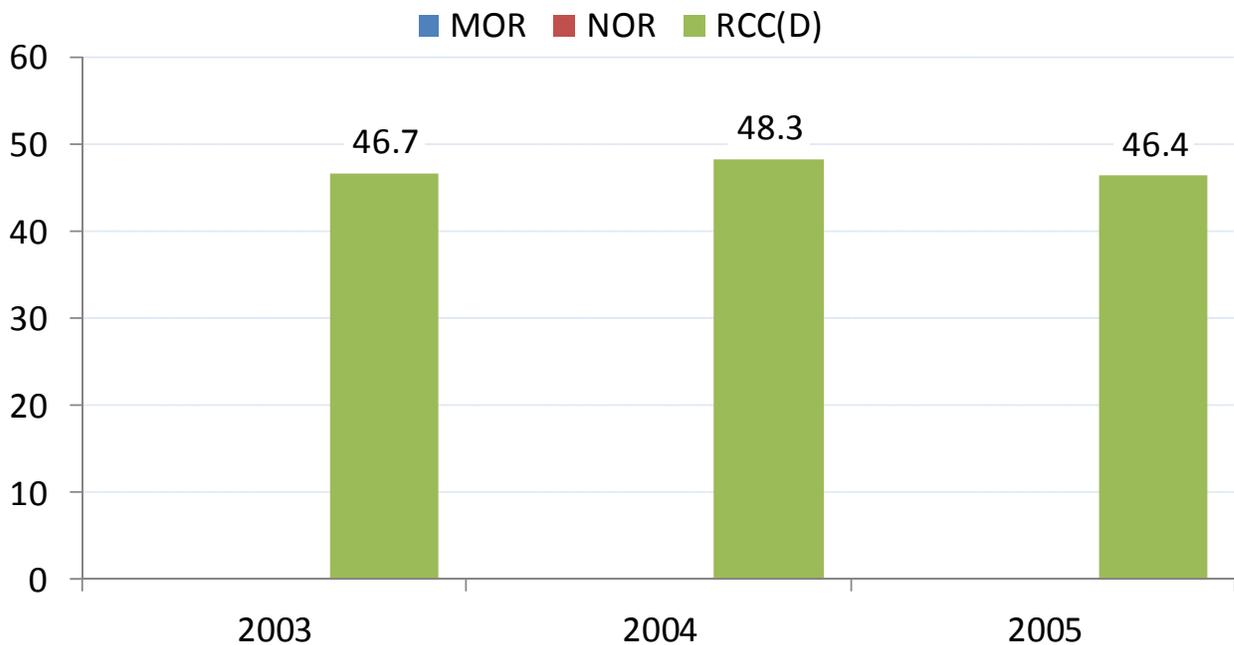
In the area of Student Progress and Achievement, for the first indicator **Degree/Certificate/Transfer**, data was provided that showed changes in the percentage of first-time students who showed "intent to complete"<sup>1</sup> and who achieved any of the following outcomes within six years: transfer to a four-year college, or earned an AA/AS, or earned a certificate of at least 18 units, or

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<sup>1</sup> A Transfer or Degree "Intent To Complete" is when a student attempts a degree applicable credit math or English course. A Certificate "Intent to Complete" is when a student attempts either an Advanced Occupational or Apprenticeship level Credit course.

achieved “Transfer Directed”<sup>2</sup> status or achieved “Transfer Prepared”<sup>3</sup> status. On this measure, RCCD remained relatively stable with the three cohorts’ rates being 46.7%, 48.3% and 46.4%, for the cohorts starting in 2003, 2004 and 2005 respectively, as shown in Figure 1. (In this report, the term “relatively stable” is used when the differences between the highest and lowest measures is less than three percentage points.) As previously noted, data for this multi-year measure is only available for RCCD, but is included in RCC’s report.

**Figure 1: Student Progress and Achievement Rate, by cohort**

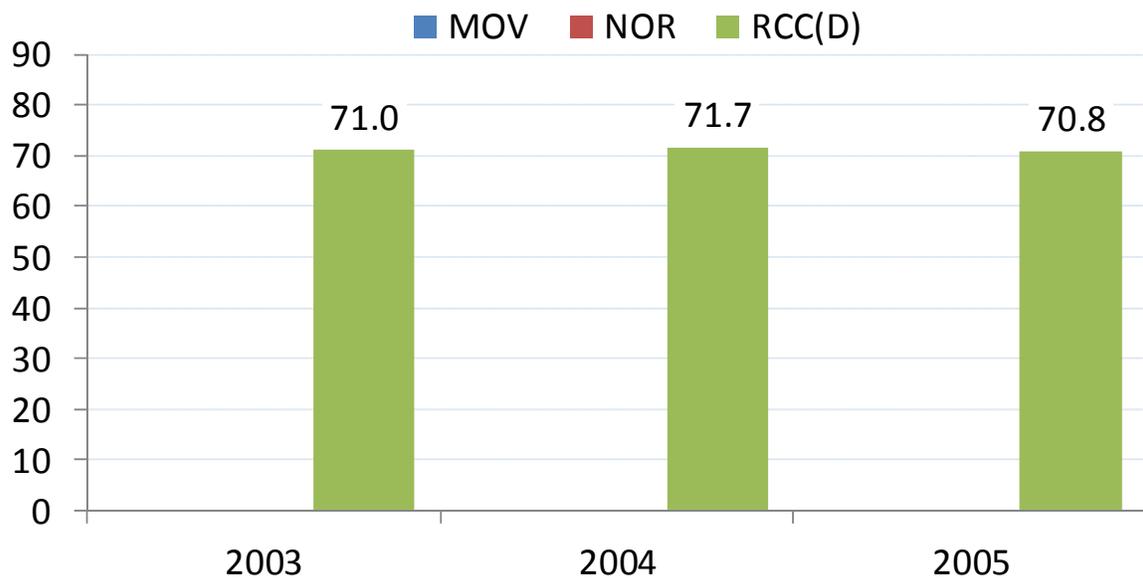


<sup>2</sup> “Transfer Directed” means a student successfully completed at least one transfer-level Math and English course.

<sup>3</sup> “Transfer Prepared” means student successfully completed 60 UC/CSU transferable units with a grade point average of at least 2.0 in those transferable courses.

For the second indicator, **Percent of Students Who Earned at Least 30 Units** (Figure 2), the percentage of first-time RCCD students who showed intent to complete and who earned at least 30 units while in the California Community College system held steady at 71.0%, 71.7% and 70.8% for the three sequential cohorts starting in fall 2003, 2004 and 2005, respectively.

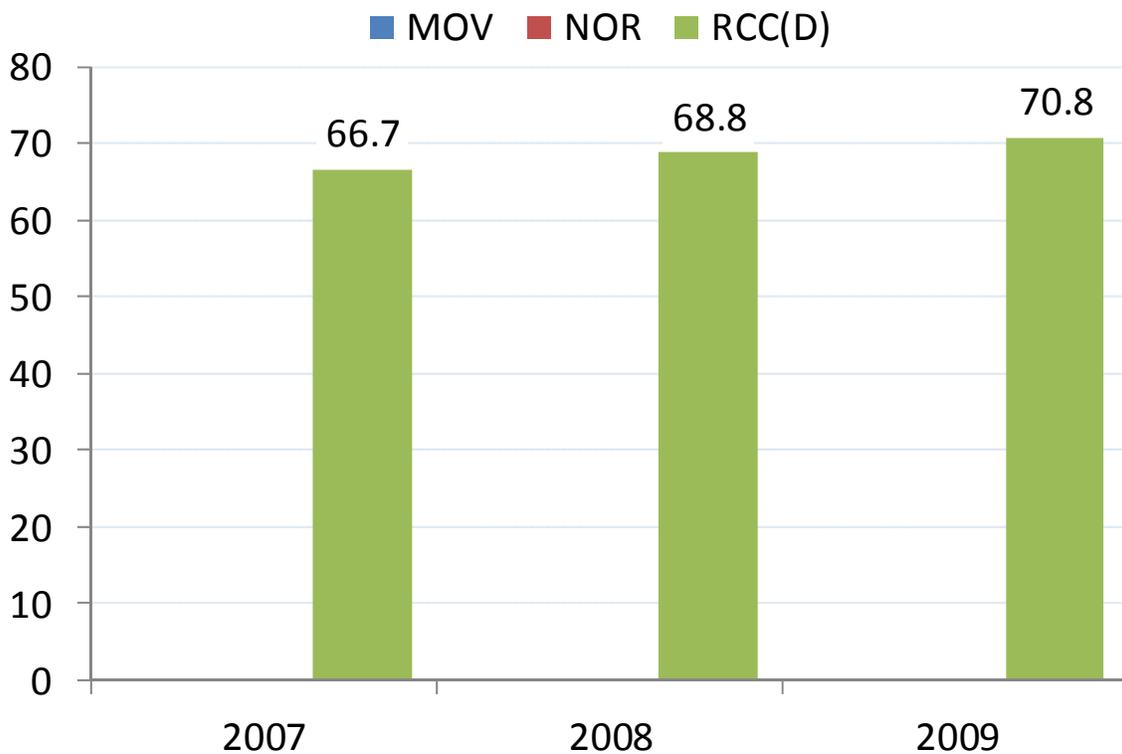
**Figure 2. Percent of Students Who Earned at Least 30 Units, by cohort**



On the third indicator, **Persistence Rate** (Figure 3), RCCD demonstrated modest, steady growth in the percentage of first-time students with a minimum of six units earned in a fall term and who returned and enrolled in the subsequent fall term anywhere in the California Community College System. These rates

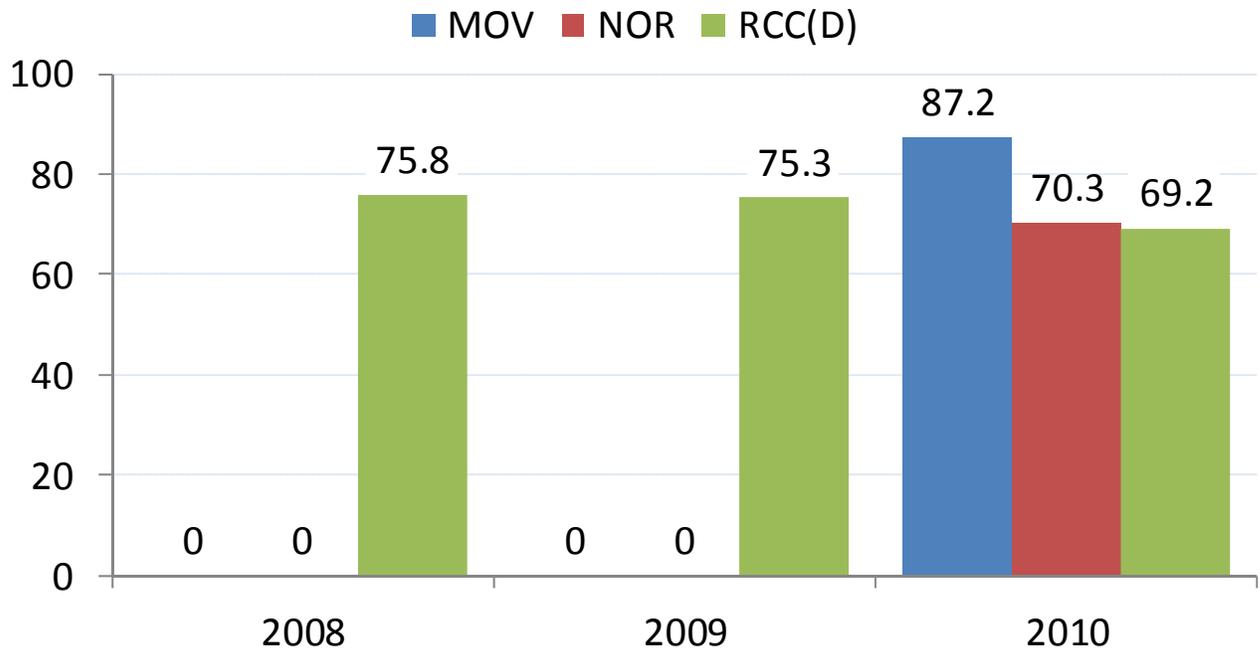
were 66.7%, 68.8% and 70.8%, for the fall 2007, 2008 and 2009 cohorts, respectively.

**Figure 3. Persistence Rate, by cohort**



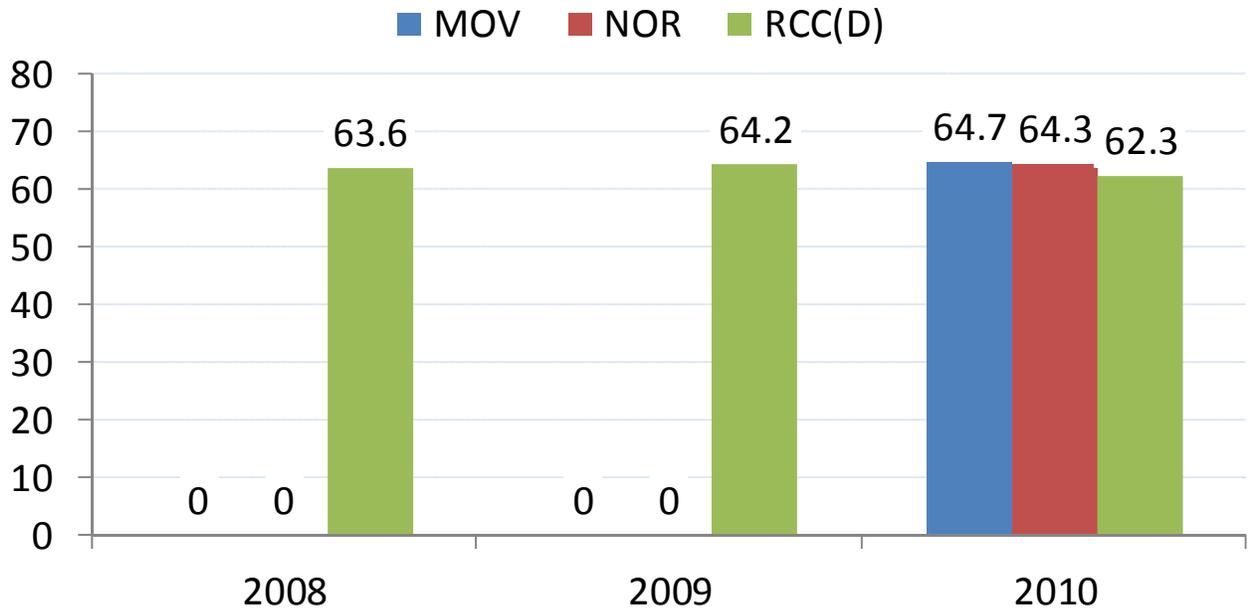
The **Annual Successful Course Completion Rate for Credit Vocational Courses** is one of the two indicators where recent year data is available for all three colleges. Figure 4 shows completion rates for the District in 2008 and 2009 and the individual college rates in 2010. The significantly higher success rate for Moreno Valley College is due to the inclusion of Ben Clark Training Center enrollments, which typically has notably higher success rates.

**Figure 4. Annual Successful Course Completion Rate for Credit Vocational Courses**



In the area of Pre-Collegiate Improvement (Basic Skills and ESL), the first measure is the **Annual Successful Course Completion Rate for Credit Basic Skills Courses** (Figure 5). Where only district rates exist for academic years 2008 and 2009, individual college rates are provided for 2010. The RCCD rates remained relatively stable at for 2008 and 2009 (at 63.6% and 64.2%, respectively), and even when examining the 2010 results, the individual colleges' rates are within 3 percentage points of each other.

**Figure 5: Annual Successful Course Completion Rate for Credit Basic Skills Courses**

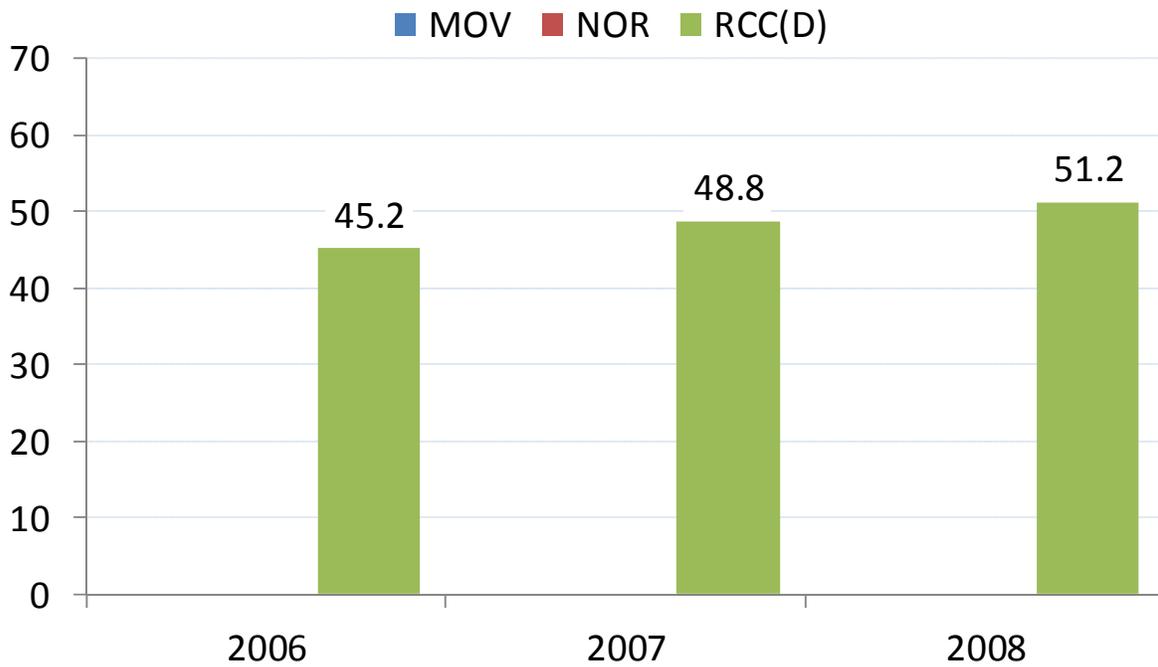


The **Improvement Rates for Credit Basic Skills Courses** is a measure comprising two different rates: **ESL Improvement Rate** and **Basic Skills Improvement Rate**. Each of these indicators measure the proportion of students successfully taking a higher level ESL or Basic Skills course within a subsequent three year period.

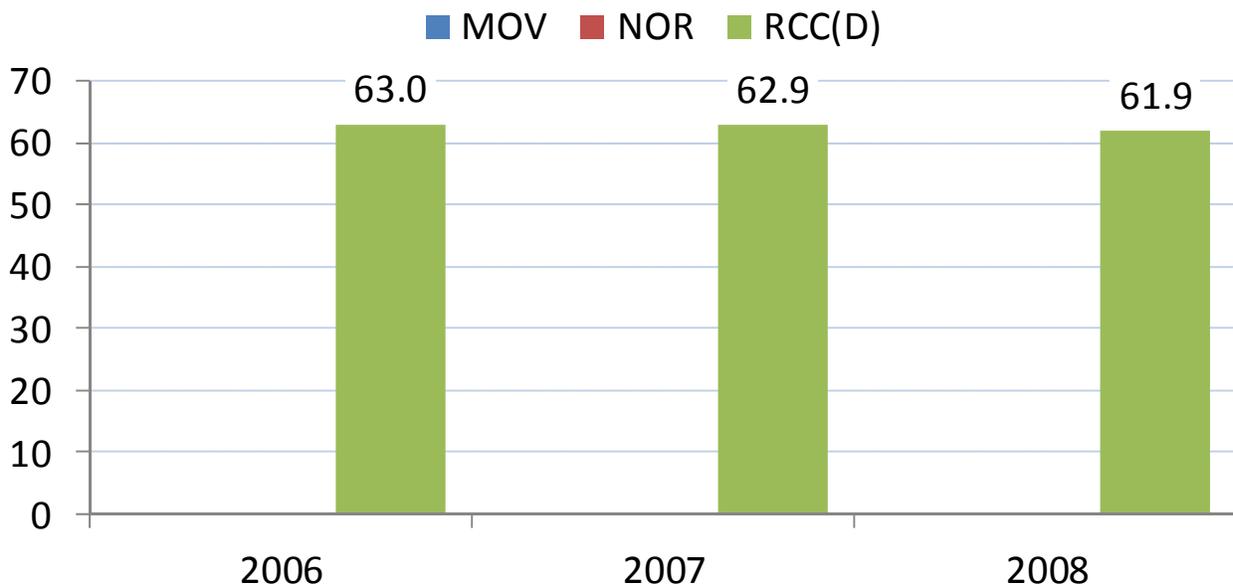
The **ESL Improvement Rates** (Figure 6) for the cohorts starting in 2006, 2007 and 2008 steadily increased with rates of 45.2% to 48.8% to 51.2%, respectively. The **Basic Skills Improvement Rate** (Figure 7) remained relatively stable with rates of 63.0%, 62.9% and 61.9% for the cohorts starting in 2006, 2007 and 2008, respectively. (The present ARCC report also lists the **Enhanced**

**Noncredit Progress and Achievement Rate**, but since RCCD does not offer any of these types of courses, that table is left blank in the report.)

**Figure 6: Improvement Rates for ESL Courses, by cohort**



**Figure 7: Improvement Rates for Basic Skills Courses, by cohort**



The college-level report also includes counts of the Annual Unduplicated Headcount and Full-Time Equivalent Students and provides demographic information (age, gender and ethnicity) about RCCD students for the past three academic years.

**College Peer Grouping:** The last section of each college-specific report is dedicated to college performance relative to their ranking within their peer grouping. The peer grouping is performed by the Chancellor's Office and represents their attempt to statistically "level the playing field". For every college-level indicator, there are external factors beyond the control of the college that affect its performance on that indicator. Colleges were grouped as "peers" based on the statistical magnitude that these external factors exerted on each college-level indicator. (For example, research literature indicates that transfer rates are affected by the level of academic preparedness of student body, distance to nearest UC/CSU, income levels of service areas, and percentage of older students served, among other external factors. Peer colleges would have similar levels on all these factors and would be classified together.) Since the peer grouping is done statistically, these groupings do not necessarily reflect any traditional, intuitive grouping method, like size of college or geographical proximity. Also, since each college-level indicator is affected by different external factors, each college is assigned to different peer groups for each indicator. The intent of the peer groupings is to provide a more comparable context for understanding one's own college performance and should be interpreted with

care. The peer grouping has been the subject of considerable discussion, and arguably it has the potential to be the most misunderstood and misreported aspect of the report. To facilitate local planning and analysis, the 2012 peer groups are the same as they were in the 2009 ARCC report.

For six of the seven indicators, RCCD is within seven percentage points of their peer groups averages. For the indicator “Percent of Students Who Earned 30 or More Units,” RCCD had the lowest rate in its peer group.

**RCCD Institutional Response:** In fall 2011, prior to the final publication of the ARCC, the Chancellor’s Office released a draft of the report with the individual colleges’ measures. As a requirement of the ARCC, each RCCD college submitted an institutional response to provide further context for interpreting their institution’s statistics, and to emphasize local factors that may help to explain outcomes.

RCCD’s ARCC draft results were presented to different district and college constituencies (RCCD Executive Cabinet and all three college Academic Senates, among others), and the colleges composed and uploaded their institutional responses.

Each college's institutional response is included on the last page of their college report. The final version of the ARCC report was published by the Chancellor's Office in late March 2012.

# Accountability Reporting for the Community Colleges, *2012 Report*

Riverside Community College District  
Teaching & Learning Committee  
October 2, 2012

David Torres, Dean  
Institutional Research

## Background

- Accountability Reporting for the Community Colleges (or ARCC) is a set of performance indicators for the California Community Colleges (CCC)
- The final report was published in March 2012
- Two level of analysis:
  - system wide performance
  - individual college performance
    - student progress and achievement
    - pre-collegiate improvement

## Moreno Valley and Norco

- “Please note that two recently accredited colleges have been included in the ARCC 2012 report: Moreno Valley College and Norco College.”
- “This college level section includes data for each of the colleges in the system at the time of this report, although data for some earlier time periods *may be missing for the newer colleges.*”

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## 2012 ARCC Report Timeline

| 2011  |     |  | 2012 |   |  |         | 2013    |  |
|---|-----|--|------|---|--|---------|---------|--|
| OCT   | NOV | DEC                                      | JAN  | FEB   | MAR  | APR-DEC | JAN-FEB | MAR  |
| Oct 17:<br>Formal data review period begins |     | Dec 2:<br>Formal data review period ends |      | Feb 7:<br>2nd Draft with college profile, summary and peer groups released for institutional response writing | Mar 9:<br>Institutional response due at CCCCCO |         |         | Mar 15:<br>Deadline to present findings to Board of Trustees |
|   |     |  |      |   | Mar 30:<br>Final 2011 ARCC Report released     |         |         |  |

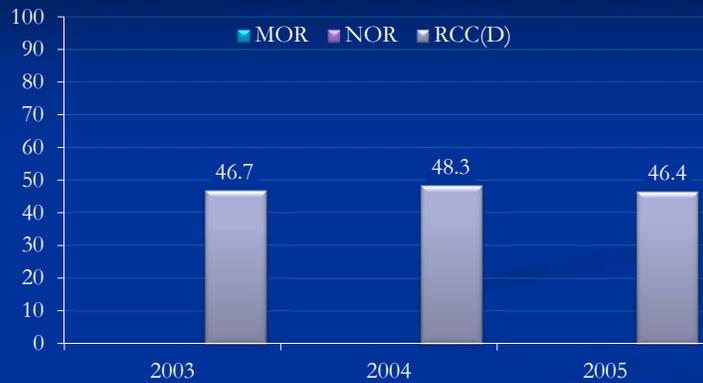
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■ When will Moreno Valley and Norco colleges have complete outcomes available?

| ARCC Report Year | 2001 | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | MVC / NC | 2010   | 2011   | 2012   | 2013   | 2014   | 2015 | 2016 | 2017 | 2018 |  |
|------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|--------|--------|--------|------|------|------|------|--|
| 2010             | S    | Year 1 |        |        | E      |        |        |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2010             |      | S      | Year 2 |        | E      |        |        |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2010             |      |        | S      | Year 3 |        | E      |        |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2011             |      | S      | Year 1 |        |        | E      |        |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2011             |      |        | S      | Year 2 |        | E      |        |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2011             |      |        |        | S      | Year 3 |        | E      |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2012             |      |        | S      | Year 1 |        |        | E      |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2012             |      |        |        | S      | Year 2 |        | E      |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2012             |      |        |        |        | S      | Year 3 |        | E      |        |          |        |        |        |        |        |      |      |      |      |  |
| 2013             |      |        | S      | Year 1 |        |        | E      |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2013             |      |        |        | S      | Year 2 |        | E      |        |        |          |        |        |        |        |        |      |      |      |      |  |
| 2013             |      |        |        |        | S      | Year 3 |        | E      |        |          |        |        |        |        |        |      |      |      |      |  |
| 2014             |      |        |        | S      | Year 1 |        |        | E      |        |          |        |        |        |        |        |      |      |      |      |  |
| 2014             |      |        |        |        | S      | Year 2 |        | E      |        |          |        |        |        |        |        |      |      |      |      |  |
| 2014             |      |        |        |        |        | S      | Year 3 |        | E      |          |        |        |        |        |        |      |      |      |      |  |
| 2015             |      |        |        |        | S      | Year 1 |        |        | E      |          |        |        |        |        |        |      |      |      |      |  |
| 2015             |      |        |        |        |        | S      | Year 2 |        | E      |          |        |        |        |        |        |      |      |      |      |  |
| 2015             |      |        |        |        |        |        | S      | Year 3 |        | E        |        |        |        |        |        |      |      |      |      |  |
| 2016             |      |        |        |        |        | S      | Year 1 |        |        | E        |        |        |        |        |        |      |      |      |      |  |
| 2016             |      |        |        |        |        |        | S      | Year 2 |        | E        |        |        |        |        |        |      |      |      |      |  |
| 2016             |      |        |        |        |        |        |        | S      | Year 3 |          | E      |        |        |        |        |      |      |      |      |  |
| 2017             |      |        |        |        |        |        |        | S      | Year 1 |          |        | E      |        |        |        |      |      |      |      |  |
| 2017             |      |        |        |        |        |        |        |        | S      | Year 2   |        | E      |        |        |        |      |      |      |      |  |
| 2017             |      |        |        |        |        |        |        |        |        | S        | Year 3 |        | E      |        |        |      |      |      |      |  |
| 2018             |      |        |        |        |        |        |        |        |        | S        | Year 1 |        |        | E      |        |      |      |      |      |  |
| 2018             |      |        |        |        |        |        |        |        |        |          | S      | Year 2 |        | E      |        |      |      |      |      |  |
| 2018             |      |        |        |        |        |        |        |        |        |          |        | S      | Year 3 |        | E      |      |      |      |      |  |
| 2019             |      |        |        |        |        |        |        |        |        |          |        | S      | Year 1 |        |        | E    |      |      |      |  |
| 2019             |      |        |        |        |        |        |        |        |        |          |        |        | S      | Year 2 |        | E    |      |      |      |  |
| 2019             |      |        |        |        |        |        |        |        |        |          |        |        |        | S      | Year 3 |      | E    |      |      |  |

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## RCCD's College Level Indicators: Student Progress and Achievement Rate



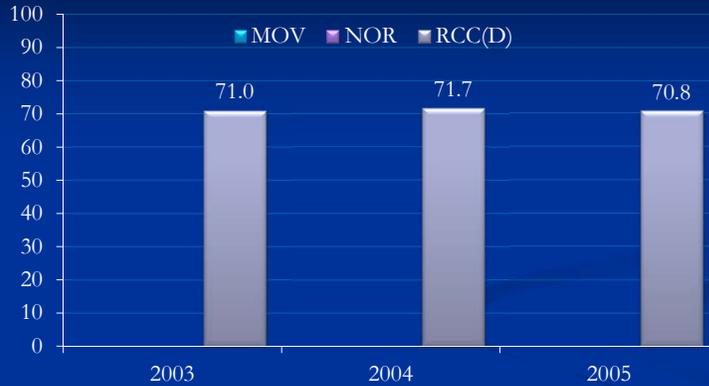
Percentage of first-time students who showed intent to complete and within six years:

- transferred to a four-year college or
- earned an AA/AS or
- earned a Certificate (18 units or more) or
- achieved "Transfer Directed" status or
- achieved "Transfer Prepared" status

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## RCCD's College Level Indicators:

### Percent of Students Who Earned at Least 30 Units



Percentage of first-time students who showed intent to complete and within six years:

- earned at least 30 units
- while in the California Community College System

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## RCCD's College Level Indicators:

### Term to Term Persistence Rate



Percentage of first-time students with:

- a minimum of six units earned in a Fall term, and
- returned and enrolled in the subsequent Fall term
- anywhere in the system.

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## RCCD's College Level Indicators:

### Annual Successful Course Completion Rate for Credit Vocational Courses



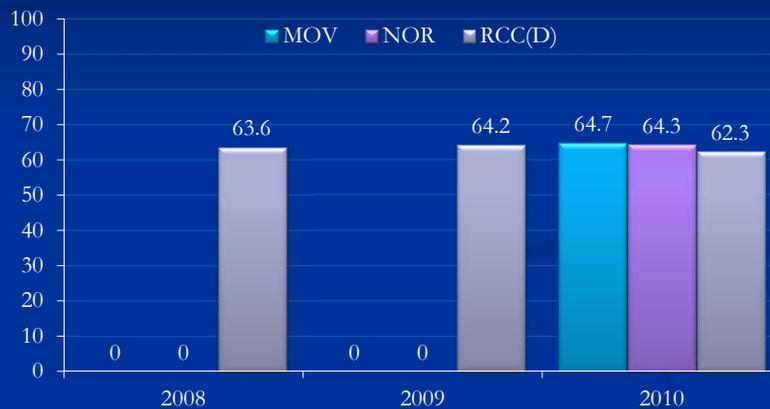
Percentage of student enrollments:

- in credit-based classes and
- courses coded as "Clearly / Adv. Occupational" or higher
- where students earned an A, B, C or CR grade

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## RCCD's College Level Indicators:

### Annual Successful Course Completion Rate for Credit Basic Skills Courses



Percentage of student enrollments:

- in credit-based classes and
- courses coded as "Basic Skills"
- where students earned an A, B, C or CR grade

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## RCCD's College Level Indicators: Improvement Rates for ESL Courses



Percentage of students who:

- successfully completed the initial ESL course and
- successfully completed a higher-level course in the same discipline
- within three academic years

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## RCCD's College Level Indicators: Improvement Rates for Credit Basic Skills Courses



Percentage of students who:

- successfully completed the initial basic skills course and
- successfully completed a higher-level course in the same discipline
- within three academic years

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## RCCD's College Level Indicators: Annual Headcount



Data Sources:  
Annual Unduplicated Headcount:  
Chancellor's Office Management Information System (COMIS)

Full-Time Equivalent Students (FTES): Chancellor's Office, Fiscal Services 320 Report.

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## RCCD's College Level Indicators: Annual FTES

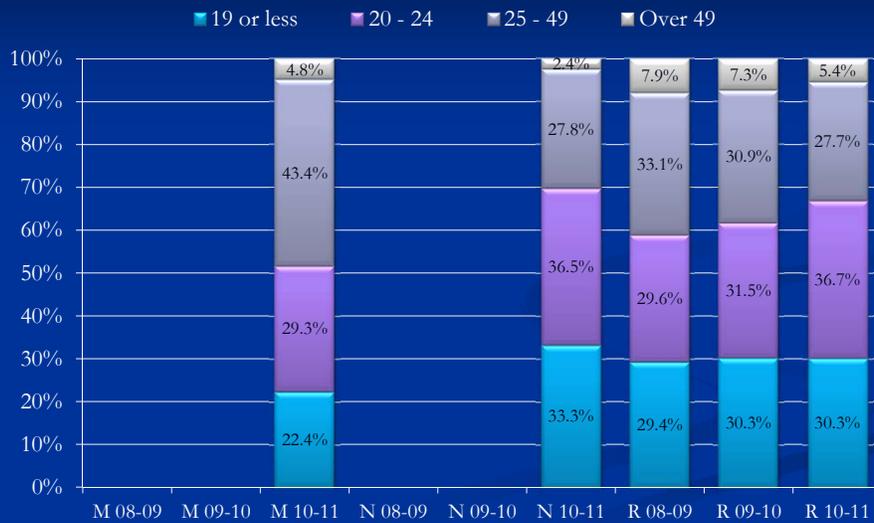


Data Sources:  
Annual Unduplicated Headcount:  
Chancellor's Office Management Information System (COMIS)

Full-Time Equivalent Students (FTES): Chancellor's Office, Fiscal Services 320 Report.

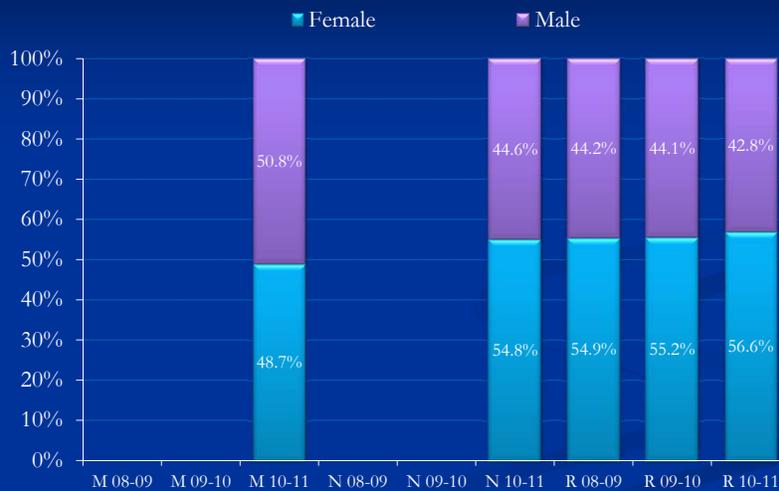
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## RCCD's College Level Indicators: Student Age (*in percentages*)



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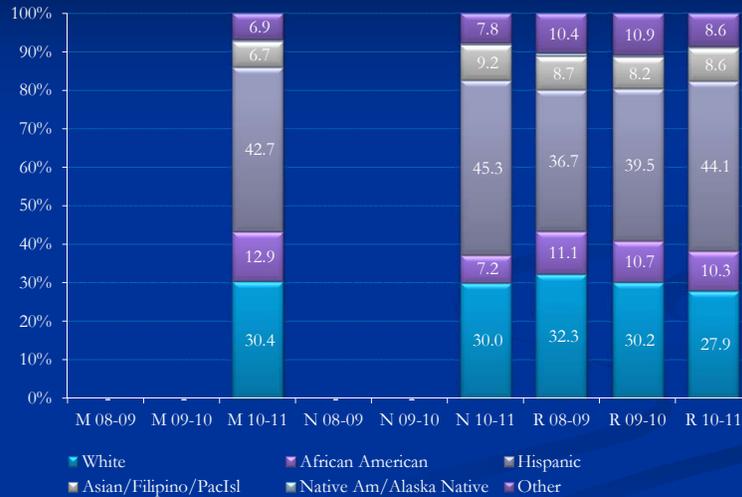
## RCCD's College Level Indicators: Student Gender\* (*in percentages*)



\*Students reporting gender as "Unknown" are not included.

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## RCCD's College Level Indicators: Student Ethnicity (*in percentages*)



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## RCCD's College Level Indicators: Peer Grouping

- The Chancellor's Office created "peer group colleges" in an attempt to "level the playing field".
- For every college-level indicator, there are external factors beyond the control of the college that affect its performance on that indicator.
- Colleges were grouped as "peers" based on the statistical magnitude that these external factors had on each college-level indicator.

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## RCCD's College Level Indicators:

### Peer Grouping: Transfer Example

- **Transfer rates are affected by external factors:**
  - level of academic preparedness of student body
  - distance to nearest UC/CSU
  - income levels of service areas
  - percentage of older students served
  
- **Colleges with similar levels on all these factors and would be classified together as “peers”.**

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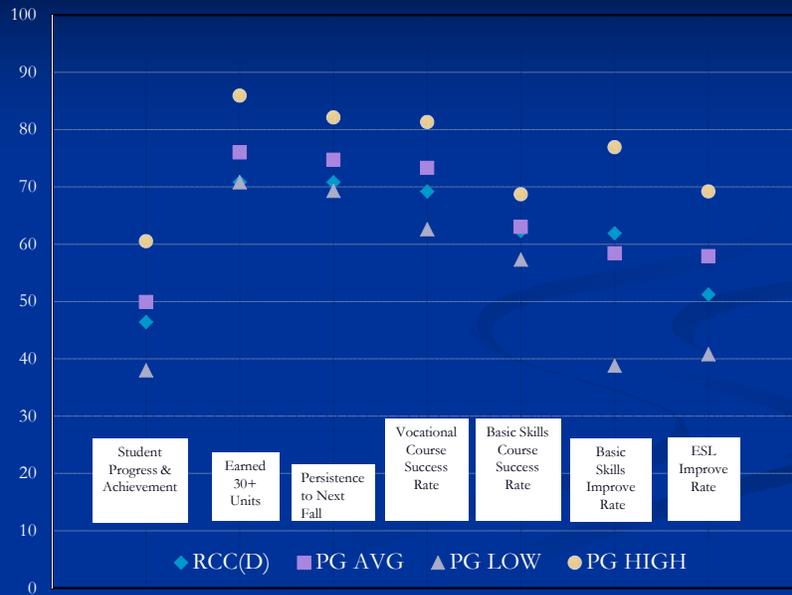
## RCCD's College Level Indicators:

### Peer Grouping: Issues to Consider

- **Peer grouping was statistically derived**
  - does not necessarily reflect any traditional, intuitive grouping method
  
- **Since each indicator is affected by different external factors, each college is assigned to different peer groups for each indicator**
  - RCC has no single peer college for each indicator
  
- **Peer grouping is intended to provide a more equitable context for interpreting college performance**
  - College to college comparisons are not encouraged

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## RCCD's College Level Indicators: Peer Grouping: Summary



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## ARCC: Institutional Response

- Sharing the draft ARCC findings
  - various district and college groups
- Institutional Response
  - Inform and encourage feedback
  - Each college created their own response

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## ARCC: In 25 Words or Less...

- On each of the seven ARCC performance measures, RCCD has either maintained or increased its score for the most recent three cohorts of data.

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## Accountability Reporting for the Community Colleges, *2012 Report*

*end of slide show*

Riverside Community College District  
Teaching & Learning Committee  
October 2, 2012

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# Agenda Item (VIII-D-1)

|                    |   |
|--------------------|---|
| Meeting            | 10/16/2012 - Regular  |
| Agenda Item        | Committee - Resources (VIII-D-1)  |
| Subject            | Tentative Project Budget and Borrowing of Measure C Funds for Science Technology Engineering and Mathematics Center Renovation Project  |
| College/District   | Norco   |
| Funding            | Title III STEM Grant and College Allocated Measure C Funds  |
| Recommended Action | It is recommended the Board of Trustees approve: (1) the Science Technology Engineering and Mathematics Center Renovation project at the Norco College; (2) a project budget in the amount of \$1,207,083; and (3) borrowing of Measure C funds in the amount of \$762,369 for the STEM Center Renovation Project while awaiting annual reimbursement from the Department of Education. |

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## Background Narrative:

Norco College was successful in obtaining a Title III Science, Technology, Engineering and Mathematics (STEM) grant beginning the 2011-12 academic year. The purpose of the grant is to develop STEM degrees that articulate to four-year institutions and increase enrollment and success rates of Hispanic and low income students.

One of the objectives of the grant is to establish a STEM Center that includes study spaces, a computer lab, and classroom space to support STEM students. The center will also serve as the facility for all MESA (Mathematics, Engineering, Science, Achievement) Program services and activities.

The Norco College Strategic Planning Process has determined the most cost effective way of achieving this objective is to renovate the unused portion of the Early Childhood Education Center (ECEC) to create a STEM Center. The approved grant budget includes the use of \$1,207,083 to remodel the unused space in the ECEC into a STEM Center. The \$1,207,083 budget allocated in the STEM Grant is awarded over a five-year period. Years 1 and 2 of the construction budget have been released in the amount of \$444,714. The remaining construction budget in the amount of \$762,369 (for years 2 through 5) will be released annually over the remaining term of the grant. To ensure that the renovation project stays on track and the objectives of the grant are met, it is therefore requested that the board approve the borrowing of Measure C funds in the amount of \$762,369 to complete the remodel. This borrowed amount will be repaid by the Department of Education through reimbursement requests over the next three years of the grant.

Additional funding may become available if the Department of Education approves Norco College's request to redirect first year carry forward funds towards construction costs. The grant's fiscal year is from October 1 through September 30 of each year. At this time, potential carry forward monies are not included in this proposal, as they have not yet been approved as part of the construction budget. Norco College has also secured the approval from the granting agency to use grant funds to remodel noninstructional spaces, such as restrooms, if deemed necessary to effectively use the building as a

STEM Center. Grant funds may also be used to purchase instructionally related furniture and equipment for the STEM Center.

STEM Proposal attached for the Board's review and consideration.

Prepared By: Paul Parnell, President, Norco College

Gus Ocegüera, Associate Dean, Grants & College Support Programs/Proj Dir

Laurens Thurman, District Consultant

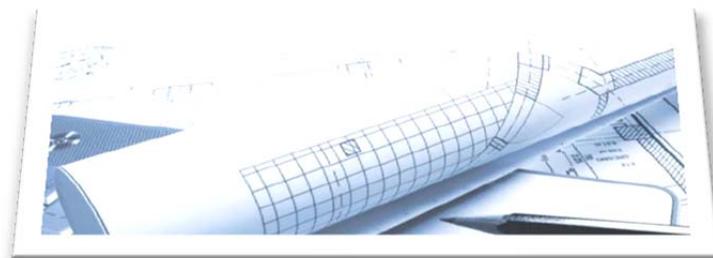
Orin Williams, Associate Vice Chancellor, Facilities Planning & Development

**Attachments:**

[20121016\\_STEM Proposal](#)



# Early Childhood Education Center Proposal



Submitted By:

Gustavo Ocegüera

Associate Dean, Grants and College Support Programs

&

Lorena Patton

Director, Title III STEM Grant

## Background

This proposal is to repurpose the unused space in the Early Childhood Education Center (ECEC) to establish a Science, Technology, Engineering & Math (STEM) Educational Center.

The Federal Department of Education awarded Norco College a five-year, Title III, STEM grant in October of 2011. The primary purpose of the grant is to create 2+2 STEM-related academic programs to increase Hispanic and low-income student transfers to 4-year postsecondary institutions. Norco College STEM Faculty will develop articulation agreements with nearby universities to improve the transfer process. One of the objectives of the grant is to develop a Mathematics, Engineering, & Science Achievement (MESA) program to support students pursuing careers in STEM. MESA will provide participants with academic counseling, tutoring, mentoring by faculty, and student success workshops.

The grant also provides construction funds to establish a STEM Center to support MESA activities and supplemental instruction. The STEM Center would include open labs for students to work on projects outside of class; access to technologies such as computers and lab equipment; participate in tutorial and supplemental instruction (SI) sessions; career and academic advisement; and gathering space for student activities. In the proposal, it was stated that the center would be built adjacent to the Science and Technology Building to increase and enhance science facilities. Fortunately, Measure C Funds and secondary effects planning allowed Norco College to upgrade its existing science facilities and therefore, it is no longer necessary to include additional science labs in the STEM Center. However, Norco College still has an obligation to establish a center to support STEM-related educational activities. To meet this obligation, we propose to renovate the unused ECEC space to establish a STEM Center that would include the components listed below:

## STEM Center Instructional Components

| Description                                       | Quantity | Square Footage | Total Square Feet |
|---|----------|----------------|-------------------|
| Enclosed Small Group Study Rooms                  | 6        | 100            | 600               |
| Open Lounge/Gathering Space/ Computer Lab         | 1        | 1,000          | 1,000             |
| Enclosed Library/ Resource Center                 | 1        | 100            | 100               |
| Work Room (copier, printers, etc.)                | 1        | 80             | 80                |
| Smart Classroom for iPad Technology (capacity-30) | 1        | 1,000          | 1,000             |
|   |          | Total          | 3,040             |

## Funding Availability & Timeline

The approved grant budget allocates a total of \$1,207,083 for construction/renovation over a five-year period. Annual grant funding allocations is as follows:

|               |                  |                         |
|---------------|------------------|-------------------------|
| <b>Year 1</b> | <b>2011-2012</b> | <b>\$ 190,591</b>       |
| <b>Year 2</b> | <b>2012-2013</b> | <b>\$ 254,123</b>       |
| <b>Year 3</b> | <b>2013-2014</b> | <b>\$ 254,123</b>       |
| <b>Year 4</b> | <b>2014-2015</b> | <b>\$ 254,123</b>       |
| <b>Year 5</b> | <b>2015-2016</b> | <b><u>\$254,123</u></b> |
|               | <b>Total</b>     | <b>\$1,207,083</b>      |

Additional funding may become available if the Department of Education approves for Norco College to redirect first year carry forward funds towards construction costs. The grant's fiscal year is from October 1 through September 30 of each year.



## Agenda Item (VIII-D-2)

|                    |   |
|--------------------|---|
| Meeting            | 10/16/2012 - Regular  |
| Agenda Item        | Committee - Resources (VIII-D-2)  |
| Subject            | Project Budget, Borrowing of Measure C Funds, and Agreement with UTC Power Corporation for Fuel Cell Installation Project   |
| College/District   | Norco   |
| Funding            | College Allocated Measure C and Public Utility Commission Self-Generation Incentive Program Funds   |
| Recommended Action | It is recommended that the Board of Trustees approve: (1) a project budget in the amount of \$3,110,000; (2) borrowing of Measure C funds in the amount of \$450,000; and (3) a contract in the amount of \$2,896,400 with UTC Power Corporation. |

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### Background Narrative:

In accord with the Board of Trustees's goal of reducing energy use to save general funds and pursue alternate energy opportunities, on October 18, 2011, the Board approved the expense of \$10,000 to make an application to the Public Utility Commission's (PUC) Self-Generation Incentive Program (SGIP). On July 17th notice was received that the SGIP incentive was awarded for the installation of a fuel cell at Norco College. The proposed project budget for the fuel cell is \$3,110,000. Staff also requests approval of a project budget allocation from Measure C Program Contingency to fund \$2,200,000 of the project. The SGIP will provide a grant incentive in the amount of \$900,000 toward the project's total budget.

Of this \$900,000 SGIP incentive, half (\$450,000) will be paid up front. The incentive remainder will be paid out by the PUC over the next five years as savings are realized. The PUC requires this disbursement to ensure projects are completed and maintained for the five years as required by the SGIP terms. It is requested the Board approve the borrowing of \$450,000 from Measure C funds to be repaid over the next four years at \$106,875 per year with a final payment of \$22,500 in the fifth year. The installation of the fuel cell will result in a net savings of over \$300,000 per year for Norco College's general fund.

Approval is also requested for the attached contract with UTC Power Corporation, based on the bid exemptions set forth in Government Code Section 4217.10-4217.18, for the purchase and installation of a Purecell Model 400 fuel cell in the amount of \$2,896,400.

Prepared By: Paul Parnell, President, Norco College  
David Bobbitt, Interim Vice President, Business Services (MVC/NC)  
Laurens Thurman, District Consultant  
Orin Williams, Associate Vice Chancellor, Facilities Planning & Development

### Attachments:

10162012\_SGIP Reservation Letter  
10162012\_Project Budget Summary  
10162012\_Energy Savings Summary  
10162012\_UTC Power Contract

**[External Sender] SGIP : Conditional Reservation Letter, Laurens Thurman [SCE-SGIP-2011-0300]**

SGIPGroup@sce.com [SGIPGroup@sce.com]

You forwarded this message on 8/21/2012 8:46 AM.

**Sent:** Tuesday, July 17, 2012 1:37 PM

**To:** Thurman, Laurens

July 17, 2012

Attn: Laurens Thurman  
Norco College  
2001 Third St.  
Norco, CA 92860-2600

**RE: SGIP11-0300 – “Norco College” 2001 Third St – Conditional Reservation Notice Letter** (Please reference this number with all correspondence)

Dear Mr. Thurman:

Your application is conditionally approved and an incentive of **\$900,000 (400 kW @ \$2.25/Watt)** is conditionally reserved pending your submittal, and our approval, of the Proof of Project Milestone submittal. You will be installing a **400 kW** fuel cell system operating on non-renewable fuel, and your eligible project cost is **\$3,732,026**. Please use this Reservation Number on all future correspondence.

Net generator output meters are required for all SGIP installations. Metering requirements can be found in Section 11 of the 2011 SGIP Handbook. All forms and interim changes to the SGIP Handbook, as they are added to the program, can be found on the SCE website at [www.sce.com/sgip](http://www.sce.com/sgip).

A copy of your RFP is due on or before **September 15, 2012**, and your full Proof of Project Milestone submittal is due on or before **March 14, 2013**. If these materials are not received by their due date the reservation will be cancelled. See the required Proof of Project Milestone information outlined in Section 3 of the 2011 SGIP Handbook. The 2011 Handbook is available on SCE's website at <http://www.sce.com/b-rs/sgip/self-generation-incentive-program.htm> under 2011 Handbook and Forms. No extensions will be granted.

If you have any questions, please call our support line, (866) 584-7436 or send an email to SGIPGroup@sce.com.

Sincerely,

Program Manager  
Self-Generation Incentive Program

# FUEL CELL INSTALLATION PROJECT

## *Project Budget Summary*

### **Proposed Project Budget:**

|                             |             |
|-----------------------------|-------------|
| ❖ SGIP Application          | \$10,000    |
| ❖ Equipment Installation    | \$2,896,400 |
| ❖ Connection fees and taxes | \$103,600   |
| ❖ Contingency               | \$100,000   |
| ❖ Project Budget            | \$3,110,000 |

### **Proposed Funding Sources:**

|                         |             |
|-------------------------|-------------|
| ❖ SGIP Incentive        | \$900,000   |
| ❖ Measure C Contingency | \$2,210,000 |
| ❖ Total Funds           | \$3,110,000 |

# FUEL CELL INSTALLATION PROJECT

## Energy Savings Summary

Current Norco electrical bill last 12 months \$465,300.73 using 3,230,000 kWh

Rate increase:

Approved Edison rate increase raise this to \$480,268.62 same energy usage  
 (Edison new rates start with August 2012 bill)

During these 12 months Norco has had buildings offline due to Secondary Effects, lowering the actual electrical usage. As of July 2012 Secondary Effects is complete and all of those buildings are online. In addition, the Operations Center will become operational April 2013. Neither are included in the last 12 months bills. When all buildings are online the estimated cost would have been:  
 \$589,685.07 using 3,965,726 kWh

Since the fuel cell will be operational about the same time Norco College has all buildings operational all savings are calculated based on that usage.

The fuel cell generates 400kW of electricity by converting lower cost natural gas into electricity.

United Technologies estimates the fuel cell will generate 2,724,386 kWh of electricity (reviewed by Southern California Edison). The actual savings are based on the hour of the day (peak, mid-peak or off-peak) as our pricing structure from Edison depends on time of use (TOU) as well as time of the year, summer having the highest rates.

A rate increase will take effect with the August 2012 bills. It increases significantly the cost per kWh during peak summer use. The fuel cell would allow Norco College to switch to a TOU-8R rate that reduces or eliminates demand charges.

The fuel cell project also includes a 42 ton absorption chiller that runs off of the waste heat of the fuel cell. This allows Norco College to not turn on the inefficient air-cooled chillers until demand exceeds 42 tons. When heat is required, the waste heat from the fuel cell is added to the hot water loop normally heated by the boilers.

Based on an analysis of monthly bills (a 75x80 cell spreadsheet) the energy savings generated by the fuel cell would be:

The UTC contract includes fuel cell and all installation costs. There will be some added costs for Edison and So Cal Gas fees and taxes on equipment portion. The service contract is all-inclusive. Our maintenance staff will not have any added duties. Fuel Cell is warranted for 10 years.

|   |                       |
|---|-----------------------|
| Savings of electrical use:  | \$368,070             |
| Savings due to change from TOU-8B to TOU-8R rate  | \$27,059              |
| Avoided chiller costs   | \$120,000             |
| Avoided Heating costs   | \$18,467              |
| Added Natural Gas Costs (fuel cell fuel)  | -\$141,661            |
| Cost of Service Contract  | -\$79,000             |
| <b>NET SAVINGS</b>  | <b>\$313,835/year</b> |
| Fuel Cell and Installation:   | \$2,896,400           |
| SGIP Incentive  | \$900,000             |
| Net Costs (not including utility & tax charges)   | \$1,996,400           |
| Estimated Budget including utility and tax charges  | \$2,100,000           |
| Simple payback (\$1,996,400/\$313,835)  | <b>6.36 years</b>     |
| Simple payback (\$2,100,000/\$313,835)  | <b>6.69 years</b>     |
| The payback time is reduced further when projections of future electrical costs are taken into account. |                       |

Savings were also calculated by Southern California Edison as part of the application process. That estimate included escalating costs of electricity and found a payback time of 5.7 years. That estimate did use the actual ASF of the buildings Norco College will have operational in April 2013.

Neither estimate considered any future construction including the Norco projects on the Five-Year Capital Construction Plan approved by the Board of Trustees. If either of those buildings are constructed, savings will be larger than projected.

**PURECELL<sup>®</sup> SYSTEM MODEL 400**  
**EQUIPMENT, INSTALLATION AND SERVICES CONTRACT**  
**FOR**  
**NORCO COLLEGE**  
**2001 THIRD STREET, NORCO, CA**



**PURECELL<sup>®</sup> SYSTEM MODEL 400**

***Prepared by:***

*UTC Power Corporation  
195 Governor's Highway  
South Windsor, CT 06074*

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**EQUIPMENT, INSTALLATION AND SERVICES CONTRACT**  
**GOLD SERVICE LEVEL**

This EQUIPMENT, INSTALLATION AND SERVICES CONTRACT (the "Contract") is made and entered into as of the last date of execution hereof by and between UTC Power Corporation, having an office and place of business in South Windsor, Connecticut (hereinafter referred to as "UTC Power") and Riverside Community College District, on Behalf of Norco College having an office and place of business at 2001 Third St., Norco, CA (hereinafter referred to as "Customer"). Customer and UTC Power are hereinafter referred to collectively as "Parties".

**PROJECT LOCATION; LOCATION OF SERVICES; THE "SITE":** 2001 Third St., Norco, CA 92860

**SHIPPING LOCATION (If Different from Site):** Same as site

**DELIVERY TERMS:** FCA, South Windsor, CT

**DELIVERY DATE:** Month/year to be finalized at signature

**EQUIPMENT, INSTALLATION AND THE "WORK"**

UTC Power shall provide and install the equipment described on the Bill of Materials attached as Appendix A hereto (the "Equipment") and perform the start-up services described in the Statement of Work attached as Appendix B hereto (the "Start-Up Services"), all in accordance with the terms of this Contract, Appendices A & B, and any and all other documents expressly incorporated herein by reference. The term "Work" shall mean all Start-Up services performed hereunder except for the performance of any warranty services.

**THE MAINTENANCE SERVICES AND REPLACEMENT PARTS - POST COMMERCIAL OPERATION DATE**

UTC Power shall perform the maintenance services described in the Scope of Services attached as Appendix C hereto (the "Maintenance Services"), in accordance with the terms of this Contract and any and all other documents incorporated herein by reference expressly applicable to Maintenance Services.

**THE EQUIPMENT AND INSTALLATION CONTRACT PRICE AND TAXES**

The price for the Equipment and Installation is \$2,896,400 (the "Contract Price"), subject to additions and deductions authorized pursuant to this Contract. Customer shall pay UTC Power, in addition to the Contract Price, any and all taxes (except for income taxes) and fees which may be imposed by any government authority arising from the sale, delivery, or subsequent use of the goods sold or otherwise under this Contract, and for which UTC Power may be held responsible for collection or payment, either on its own behalf or that of Customer; such taxes shall be invoiced as a separate line item from the Contract Price.

Is Equipment for resale? Yes or No  
If Yes, Customer must provide Resale Certificate.

Is Customer a tax-exempt entity? Yes or No  
If Yes, Customer must provide Certificate of Tax-Exemption.

**THE MAINTENANCE SERVICES PRICE**

The annual payment for the Maintenance Services in the first year of the Term shall be \$91,000, and the total price for Maintenance Services during the Term shall be \$1,043,213 (the "Maintenance Services Price"), subject to additions and deductions authorized pursuant to this Contract. The Maintenance Services Price payment schedule is as follows:

| <u>Year</u> | <u>Annual Payment</u> | <u>Year</u> | <u>Annual Payment</u> |
|-------------|-----------------------|-------------|-----------------------|
| 1           | \$91,000              | 6           | \$105,494             |
| 2           | \$93,730              | 7           | \$108,659             |
| 3           | \$96,542              | 8           | \$111,919             |
| 4           | \$99,438              | 9           | \$115,276             |
| 5           | \$102,421             | 10          | \$118,734             |

In addition to the Maintenance Services Price, Customer shall be responsible for costs associated with Unscheduled Maintenance, pursuant to Appendix D attached hereto.

**TERM OF MAINTENANCE SERVICES**

The Maintenance Services shall become effective upon the Commercial Operation Date as defined in the Standard Terms and Conditions (the "Effective Date") and shall continue for a ten (10) year term (the "Term"). Any delay in the Commercial Operation Date of more than six (6) months, not caused by UTC Power, may result in an adjustment to the Maintenance Services Price.

**NOTICES**

Address all notices, which shall be made in the English language, by certified mail, return receipt requested, or by facsimile to:

**UTC POWER:**

UTC Power Corporation  
195 Governor's Highway  
South Windsor, CT 06074 U.S.A.  
Attention: Counsel  
Facsimile: (860) 353-6308

**CUSTOMER:**

Norco College  
2001 Third Street  
Norco, CA 92860  
Attention: Laurens Thurman  
Facsimile: (951) 372-7188

**ACKNOWLEDGEMENT**

This Contract, including the Bill of Materials, Statement of Work and Scope of Services attached hereto and each attachment and other document appended hereto and expressly incorporated herein, if any, shall be the binding agreement between the Parties upon the execution hereof by an authorized representative of each of the Parties.

**Acknowledged in Duplicate by:**

**UTC POWER CORPORATION:**

**CUSTOMER:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: James L. Buysse\_\_\_\_\_

Title: \_\_\_\_\_

Title: Vice Chancellor, Administration and Finance

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**STANDARD TERMS & CONDITIONS**

**INVOICING SCHEDULE FOR EQUIPMENT, INSTALLATION AND START-UP SERVICES**

|   |  |
|---|--|
| Upon Contract execution:                                | First payment 30% of Contract Price  |
| Upon first delivery of the Equipment:                   | Second payment 50% of Contract Price<br>(totaling 80% of the Contract Price) |
| Upon completion of installation:                        | Third payment 10% of Contract Price<br>(totaling 90% of the Contract Price)  |
| Upon completion of Commercial Operation Date checklist: | Final payment 10% of Contract Price (totaling 100% of the Contract Price)    |

The first payment of the Contract Price is nonrefundable. In the event that Customer seeks to cancel or to terminate its obligations hereunder, Customer shall pay to UTC Power all of UTC Power's engineering design costs incurred as of such date and all of UTC Power's out-of-pocket costs, including any restocking or other charges owed to any supplier, as well as any lost profit of UTC Power. The foregoing rights are not in lieu of, but shall be in addition to, any other rights that UTC Power may have at law or in equity. UTC Power reserves the right to amend the invoicing schedule and payment terms and/or require pre-payment, letter of credit or other alternative method of payment, if UTC Power determines, in its sole discretion that Customer's financial condition at any time does not justify continuance of the invoicing schedule and payment terms contained herein.

**INVOICING SCHEDULE FOR MAINTENANCE SERVICES**

UTC Power shall invoice Customer for the year one annual payment for Maintenance Services promptly after the Effective Date, and for each subsequent annual payment during the Term on the anniversary of the Effective Date. Customer shall pay UTC Power, in addition to the Maintenance Services Price, any and all taxes (except for income taxes), fees or added expenses resulting from new legislation, customs, duties or other charges which may be imposed by any government authority arising from the performance of the Maintenance Services, or otherwise under this Contract, and for which UTC Power may be held responsible for collection or payment, either on its own behalf or that of Customer.

Is Customer a tax-exempt entity? Yes or No      If Yes, Customer must provide Certificate of Tax-Exemption.

**INVOICING:**

Invoices to the Customer shall be addressed as follows and invoices shall be deemed received on the date transmitted electronically by UTC Power or, if sent by US Postal Service, three (3) business days after mailing:

Norco College  
2001 Third Street  
Norco, CA 92860  
Attention: Laurens Thurman  
Telephone: (951)372-7157  
Facsimile: (951)372-7188

**PAYMENT TERMS:**

All payments made to UTC Power shall be made in U.S. dollar funds by wire transfer of immediately available funds or by check in the required remittance amount without discount to a U.S. bank designated by UTC Power for credit to UTC Power's account. If payment is made by check Customer shall send the check to:

Regular Mail

UTC Power Corporation  
Dept. CH 10788  
Palatine, IL 60055-0594

Overnight Mail

Mellon Financial  
5505 Cumberland Ave. Suite 307  
Chicago, IL 60656-1471  
Attn: Lockbox Supervisor  
UTC Power Corporation – CH10788  
Phone: (773) 763-5631

If the payment is made by wire transfer, Customer shall transfer funds to UTC Power's account at:

Mellon Financial Corp  
Mellon Client Service Center  
500 Ross Street  
Pittsburgh, PA 15262-0001  
Acct #: 121-1205  
ABA Routing # (U.S.): 043000261  
Swift # (International): MELNUS3P

Payment terms are net thirty (30) days of invoice date and each payment will accrue interest from the date it is due until the date it is received by UTC Power, at a rate of 1.5% per month. In no event shall this interest be deemed to be a penalty but shall be solely construed as an administrative charge to UTC Power arising out of Customer's late payment. Customer shall reimburse UTC Power for any expenses, including reasonable attorneys' fees, incurred in collecting any overdue payments, and in no event shall the payment hereunder exceed any applicable federal or state usury laws. UTC Power shall submit invoices for payment to Customer at the address indicated under the section herein entitled NOTICES, if any, or as otherwise directed in writing by Customer.

Except as otherwise provided in this Contract, including the Statement of Work and "Changes or Extras" provision, the prices set forth in the Contract Price are firm, provided that if Customer delays or requests a delay in delivery of the Equipment from the agreed upon Delivery Date, then Customer agrees to pay UTC Power any increased costs that it incurs from third parties based on such delay, including any storage and rigging fees, and any price increases from suppliers of the Equipment or any services under this Contract. Delays caused by a third party (specifically including Southern California Edison) are not to be deemed caused by the Customer. If Customer delays or requests a delay in delivery of the Equipment from the agreed upon Delivery Date, UTC Power reserves the right to deliver the Equipment to either the Site or such other location designated in writing by Customer.

UTC Power reserves the right to discontinue the Work at any time when payments are overdue, until all payments due to UTC Power shall have been made, pursuant to the terms herein. Nothing shall serve to void or reduce UTC Power's entitlement to payment for Work properly performed or the Equipment. Further, if at any time upon reasonable evidence UTC Power is insecure with respect to Customer's ability to perform Customer's obligations hereunder, UTC Power may give notice to Customer to provide timely and reasonable further assurance of Customer's ability to perform. If assurances satisfactory to UTC Power are not forthcoming promptly, UTC Power reserves the right at UTC Power's option to discontinue the Work or to terminate this Contract. Customer agrees that UTC Power shall have the right to remove the Equipment from the Site at Customer's cost and take possession and title to the Equipment, irrespective of the manner of attachment to the realty, the sale, mortgage or lease of the premises or the prior acceptance of notes or extensions of time for payment if any of the payments are overdue and remain overdue for a period of sixty (60) days. UTC Power shall be entitled to payment from Customer of UTC Power's reasonable legal expenses, including actual attorneys' fees, incurred in collecting any payment hereunder.

**SERVICES AND MATERIALS:**

**A) Equipment, Installation and Start-Up Services**

UTC Power shall provide a copy of the factory test report for the PureCell® Model 400 fuel cell upon shipment to Customer. UTC Power will provide the Equipment, Start-Up Services and prepare the Equipment for the Commercial Operation Date at the Site in accordance the Statement of Work (Appendix B). "Commercial Operation Date" shall mean the completion of the start-up procedure for the Equipment in accordance with the

Statement of Work, including verification that the Equipment is functioning and has the ability to complete the Utility Inter-connect. UTC Power agrees to cooperatively work with Customer to allow Customer to timely obtain Utility Inter-connect approval from the utility provider in support of achieving the Commercial Operation Date. The Commercial Operation Date will be set after the Equipment has been authorized for interconnection by the local utility agency, and the Equipment has supplied power to the Customer's site for 72 continuous hours at the maximum power level required during that duration, up to 400kw. After this time, notice of Commercial Operation will be supplied to the Customer either via email or fax. After the Commercial Operation Date, UTC Power will assist the Customer with activation, optimization and testing of any Customer owned heat recovery and/or grid independent electrical systems for up to 24 man-hours. Any additional assistance will be subject to a separate time & material contract agreed to by the parties.

UTC Power shall use commercially reasonable efforts to perform the Work substantially in compliance with the project timeline, if any, included in the attached Statement of Work (which timeline shall be adjusted periodically to reflect the actual progress of the Work); however, UTC Power does not guarantee a particular date for shipment, delivery or installation of Equipment or the Work. Customer shall be provided with a copy of the Commercial Operation Date checklist and upon completion of the Commercial Operation Date checklist the fuel cell will operate to provide Customer with the capability listed in Appendix E.

UTC Power shall perform and execute the provisions of this Contract as an independent contractor and shall not be an agent or employee of Customer. UTC Power may provide any or all of the Start-Up Services required under this Contract through a UTC Power-authorized service provider, in which case UTC Power shall be responsible and liable for all aspects of the performance of such Start-Up Services by such third-party service provider.

Without limiting its obligation to deliver the Equipment as described in the Bill of Materials (Appendix A), UTC Power reserves the right to change or supersede product descriptions and part numbers of any equipment to be provided under this Contract. Except as expressly stated herein or in the attached Statement of Work, UTC Power shall not be required to provide any materials related to the Equipment or to provide any Start-Up Services relating to the Equipment, including to perform preparation or clean-up work at the Site, perform tests, install any items of Equipment or parts thereof, or make modifications, that may be recommended or directed by an insurance company, or a government, state, municipal or local utility, or other authority. UTC Power may provide any Equipment-related documentation to Customer electronically. Customer acknowledges that any quotations, cost or other analysis, or other materials provided by UTC Power to Customer are for informational purposes only, that no liability will accrue to UTC Power based on any such materials and that all of the obligations and warranties of UTC Power are as provided herein and are not supplemented or amended by any such materials.

Customer shall monitor the system, using Customer's personnel, who shall receive fuel cell overview training from UTC Power via NetMeeting or a similar internet conferencing system at no cost the Customer. It is estimated that the Customer's monitoring of the fuel cell will typically require no more than a visual "walk by" inspection by the Customer's personnel. The Customer personnel responsible for the visual "walk by" shall perform their duties with reasonable care and in accordance with the instructions in the Owner's Manual and training provided by UTC Power. The fuel cell overview training shall take approximately 1-2 hours to complete. The training will cover an overview of the following: fuel cell operation, key features of the fuel cell, interface connections, visual check and the fuel cell support instructions. Any additional on-site overview training requested by the Customer shall be mutually agreed to by the parties and the Customer shall be responsible for all labor and travel related expenses.

**B) Maintenance Services and Replacement Parts Post Commercial Operation Date**

UTC Power shall perform and execute the provisions of this Contract as an independent contractor and shall not be an agent or employee of Customer. UTC Power may provide any or all of the Maintenance Services required under this Contract through a UTC Power-authorized service provider, in which case UTC Power shall be responsible and liable for all aspects of the performance of such Maintenance Services by such third-party service provider. Following maintenance specified in this Contract, UTC Power will return the Power Plant to approximately the level of performance of the Power Plant had immediately prior to the shutdown. Unless

otherwise agreed as provided herein, the Maintenance Services will be performed during the regular working hours of the regular working days of UTC Power or, if applicable, its subcontractors. Any Maintenance Services shall not be performed at times or during days when workers are entitled to overtime or premium rates unless Customer shall first have been advised of such situation, the applicable rates and approved such work and then such Maintenance Services will be performed at the particular workers' then applicable amount or rate of payment for work at such time or days. Customer agrees to reimburse UTC Power for any and all costs associated with such work done at overtime or premium rates approved by the Customer.

Any parts provided under this Contract will be new parts manufactured or selected by UTC Power or parts reconditioned to UTC Power standards. All replacement parts will be provided by UTC Power in exchange for the parts replaced. If any part delivered hereunder incorporates computer software, the parties agree that UTC Power is not selling the software to the Customer but merely providing a license to use such software for operating the Equipment for which such part was provided. By accepting delivery of such part the Customer agrees not to copy or let others copy such software, to keep such software in confidence, to use such software solely for its internal purposes in connection with the operation of the Equipment covered under this Contract, and not to transfer possession of such part to others except as part of a transfer of ownership of the Equipment, in which case the license to use such software shall be automatically assigned to the transferee of the Equipment.

### **EXCLUSIONS FOR MAINTENANCE SERVICES**

UTC Power shall be responsible for only those items and effort expressly set forth in this Contract (including the Statement of Work). UTC Power shall not be responsible for items not typically subject to mechanical maintenance including but not limited to; duct work, casings, cabinets, fixtures, structural supports, grillage, water piping, steam piping, drain piping, cooling tower fill, boiler tubes, boiler refractory, disconnect switches and circuit breakers. UTC Power shall not be responsible for repairs, replacements, alterations, additions, adjustments, unscheduled calls or emergency calls, any of which is caused by (a) negligent operation, (b) failure to operate in accordance with the recommendations set forth in any manuals provided by UTC Power, (c) operation in excess of the specifications set forth in any manuals provided by UTC Power, but excluding the negligence, acts or omissions of UTC Power or its agents, (d) repairs performed by non-UTC Power authorized personnel, (e) vandalism, building system design, or (f) any damage caused by the environment in which the Equipment is situated, including damage due to freezing, weather, the environment, chemical/electrochemical attack, heat source or consistent lack of heat from heat source, contaminated heat source, effects of corrosive and/or erosive environments or fuels, other corrosion or erosion, condenser, evaporator or compressor fouling, power quality disturbances, or the presence of mold, fungi, mildew or bacteria, or any other cause beyond UTC Power's control. UTC Power shall not be responsible for the identification, detection, abatement, encapsulating or removal of asbestos, products or materials containing asbestos, other hazardous substances, mold, fungi, mildew, or bacteria. In the event that UTC Power encounters any asbestos product or any hazardous material in the course of performing its work, UTC Power may suspend its work and remove its employees from the project, until such product or material, and any hazards connected with it are abated. UTC Power shall receive an extension of time to complete its work and compensation for delays encountered as a result of such situation and its correction. UTC Power shall not be required to perform maintenance services or make modifications that may be recommended or directed by insurance companies, government, state, municipal or other authority. However, in the event any such recommendations occur, UTC Power, at its option, may submit a proposal for Customer's consideration in addition to this Contract.

### **CHANGES OR EXTRAS**

#### **A) Equipment, Installation and Start-Up Services**

UTC Power will perform changes, modifications, additions, deletions or extras to the Work if agreed to in a writing signed by both Parties ("Change Order"). The Change Order shall contain the new specifications, an adjustment to the Contract Price and any adjustment to the time for completion of the Work. Unless otherwise agreed as provided herein, the Work will be performed during the regular working hours of the regular working days of UTC Power or, if applicable, its subcontractors. Any Work performed at times or during days when workers are entitled to overtime or premium rates will be performed at the particular workers' then applicable amount or rate of payment for work at such time or days. Customer agrees to reimburse UTC Power for any and all costs associated with such work done at overtime or premium rates.

## **B) Maintenance Services and Replacement Parts Post Commercial Operation Date**

UTC Power will perform changes, modifications, additions, deletions or extras to the Maintenance Services if agreed to in a Change Order that contains the new scope of services and an adjustment to the Maintenance Services Price. Services or parts requested by the Customer in addition to those Maintenance Services specified in this Contract will be provided upon receipt of the Customer's written authorization and invoiced at UTC Power's prevailing labor rates and parts charges. Such additional services or parts shall be supplied under the terms of this Contract.

## **WARRANTIES**

### **A) Equipment**

UTC Power provides the following Limited Warranty (the "Equipment Warranty") for its PureCell System Model 400 Fuel Cell Power Plant ("Power Plant") used in stationary power generation applications. This Equipment Warranty applies to the first purchaser (the "Customer") only during the warranty period and is not transferable without written approval of UTC Power.

UTC Power warrants that the Power Plant, operated in accordance with the specifications provided by UTC Power, shall be free from defects in material and workmanship at the time of shipment. UTC Power's obligations under the Equipment Warranty shall expire one (1) year from the first start-up of the Power Plant following installation at Customer's site, but in no event later than eighteen (18) months after date of shipment of such Power Plant (FCA South Windsor, CT). Customer's sole remedy under the Equipment Warranty is limited to UTC Power correcting any such defect as Customer reports to UTC Power within the Equipment Warranty period by, at UTC Power's option, repair or replacement provided all payments due to UTC Power by Customer have been made in full. Customer agrees to provide UTC Power full access to the Power Plant for purposes of repair or replacement under the Equipment Warranty and agrees to provide, at its sole cost, the personnel and equipment required to provide such access to UTC Power, including any personnel and equipment required for any rigging, hoisting and related services necessary to perform work under the Equipment Warranty. In order to assert a valid warranty claim, Customer must provide and maintain Broadband/DSL connection (or other continuous connection approved by UTC Power) at Customer's own expense throughout the applicable Equipment Warranty period so that UTC Power can, at its option, remotely monitor the Power Plant and its operation during such period. All Power Plant parts used for repair or replacement under the Equipment Warranty shall be free from defects in material and workmanship at the time of such repair or replacement, and the balance of the applicable warranty period for the originally provided materials shall apply. UTC Power at its discretion may use refurbished parts as replacement parts. Replaced parts become UTC Power's property upon removal.

### **Exclusions to Equipment Warranty**

UTC Power or its Authorized Service Provider shall perform all preventive maintenance, repairs and alterations during the Equipment Warranty period. UTC Power does not agree to bear the cost of repairs or replacements due to vandalism, abuse, misuse, neglect, failure to adequately protect the Power Plant and other equipment from debris or other hazards and materials, normal wear and tear, failure to adhere to obligations under a service agreement for the Power Plant, if any, building system design, freezing, unusual weather events, earthquakes or other natural disasters, corrosive and/or erosive environments or fuels, other corrosion or erosion, compressor fouling, power quality disturbances, modifications not executed by UTC Power, improper or insufficient maintenance, failure to conform to the gas or make-up water tolerances of the Power Plant as outlined in the PureCell® System Model 400 Product Data and Applications Guide, as revised from time to time, or any causes beyond UTC Power's control. This Equipment Warranty does not cover the costs associated with normal preventive maintenance, including, but not limited to resin, charcoal, filters and purge gas. Excessive customer or grid induced shutdowns (other than UTC Power induced shutdowns for planned maintenance) may compromise the performance of the Power Plant's cell stack assembly; therefore, UTC Power does not agree under this Equipment Warranty to bear the cost of any repairs or replacements in the event the number of Power Plant shutdowns exceeds the limit provided by UTC Power in the then current Service Manual (not including UTC Power induced shutdowns for planned maintenance). UTC Power does not authorize any other person or party to

assume or create for it any other obligation or liability in connection with the products or any part of the products. The Equipment Warranty shall not be enlarged by, nor shall any obligation or liability of UTC Power arise due to providing monitoring, technical advice, facilities or service in connection with any product or contract.

**B) Installation and Start-up Services**

UTC Power warrants to Customer that for a period of one (1) year from the Commercial Operation Date, the Work performed by UTC Power hereunder will comply in all material respects with the attached Statement of Work and will be free from material defects in workmanship (“Installation Warranty”). UTC Power’s sole liability and Customer’s exclusive remedy under this Installation Warranty are limited to UTC Power’s re-performance of such Start-Up Services as are shown to UTC Power’s reasonable satisfaction to have been defective, provided that written notice of such alleged defective Start-Up Services shall have been given by Customer to UTC Power within one (1) year after the performance of such Start-Up Services by UTC Power. UTC Power assumes no responsibility or liability for any materials or equipment, whether new or used, provided by Customer for use in the Work or incorporation into the Site or Equipment.

As part of its Start-Up services hereunder, in the event UTC Power provides any Third-Party Equipment (as defined in the Statement of Work) to Customer, UTC Power will pass through, for the benefit of Customer, transferable standard warranties of the applicable manufacturer of the Third-Party Equipment (“Third Party Equipment Warranties”) running directly to Customer or assignable by UTC Power to Customer, with respect to the Third-Party Equipment. With respect to such Third-Party Equipment Warranties, UTC Power’s liability shall be limited to using reasonable efforts, short of litigation, to enforce the Third-Party Equipment Warranties on behalf of Customer.

Customer must provide, pay for and maintain a dedicated Broadband/DSL connection with static IP, or other continuous connection approved by UTC Power, for UTC Power’s remote monitoring service. Customer agrees to provide UTC Power reasonable access to the Equipment for purposes of repair or replacement under this warranty and agrees to provide, at its sole cost, the personnel and equipment required to provide such access to UTC Power, including and personnel and equipment required for any rigging, hoisting and related services necessary to perform work under this warranty.

**C) Maintenance Services and Replacement Parts Post Commercial Operation Date**

UTC Power warrants that all Maintenance Services provided under this Contract shall be performed to industry standards, in a workmanlike manner and in accordance with all applicable Federal and State laws. UTC Power also warrants all UTC Power parts or components supplied hereunder to be free from defects in material and workmanship. UTC Power parts and components used in connection with the Maintenance Warranty shall be warranted for the longer of the remaining original equipment warranty provided by UTC Power and ninety (90) days from installation. Except as expressly provided elsewhere in this Contract, the Maintenance Services provided under this Contract shall be warranted for ninety (90) days from completion of such Maintenance Services. UTC Power shall at its option repair or replace any such defective parts, components or service, except to the extent they were damaged, abused, altered by a third-party or affected by chemical properties (except to the extent that exposure to such chemical properties is expected to be reasonably present under normal operating conditions) subject to the exclusions set forth in the section entitled EXCLUSIONS FOR MAINTENANCE SERVICES. Following maintenance specified in this Contract, UTC Power will return the Power Plant to approximately the level of performance of the Power Plant had immediately prior to the shutdown. Any warranty claim must be provided to UTC Power in writing prior to the end of the applicable warranty period. UTC Power’s obligation to re-perform services or to repair/replace any defective parts in connection with the Maintenance Services shall be Customer’s exclusive remedy under this warranty.

THE WARRANTIES LIST ABOVE ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY; INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE, ALL OF WHICH ARE HEREBY WAIVED BY CUSTOMER AND DISCLAIMED BY UTC POWER.

## PATENT INFRINGEMENT

UTC Power shall conduct, at its own expense, the entire defense of any claim alleging that, without further combination, Customer's use or reuse of the Equipment directly infringes any patents of the United States of America, but only on the conditions that: (a) UTC Power receives prompt written notice of such claim and the full opportunity and authority to conduct the sole defense thereof, including settlement and appeals, and all information available to Customer and other defendants for such defense; (b) such Equipment is made according to a specification or design provided by UTC Power or, if a process patent is involved, the process at issue is a process that was developed by UTC Power; and (c) the claim is brought against Customer or a person expressly indemnified by Customer. Provided all the foregoing conditions have been met, UTC Power shall either settle such claim, or pay all court awarded damages. If the use or resale of the Equipment is finally enjoined, UTC Power shall at its option; (i) procure for the defendant the right to use or resell such Equipment; (ii) replace such goods with equivalent non-infringing Equipment; (iii) modify such Equipment so it becomes non-infringing but equivalent; or (iv) remove such Equipment and refund the purchase price. UTC Power grants no indemnity under patents of any nation other than as specified above, nor with respect to any goods manufactured according to a specification or design of anyone other than UTC Power. If any claim is based on a Customer provided specification or design or on the performance of a process not recommended in writing by UTC Power, or on the use or sale of Equipment delivered hereunder in combination with other goods not delivered to Customer by UTC Power, Customer shall indemnify and hold UTC Power harmless therefrom. The foregoing provisions state the entire liability of UTC Power for intellectual property rights infringement.

## OUTPUT GUARANTEE

During the term of this Agreement for the **PureCell® System Model 400** (each, a "Power Plant" and collectively, the "System"), UTC Power separately guarantees for the Power Plant, the capability to deliver an average power output ("Guaranteed Minimum Output" or "GMO") in accordance with the following table.

| Annual Period | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
|---------------|------|------|------|------|------|------|------|------|------|------|
| GMO (MWh)     | 3153 | 3153 | 3153 | 3153 | 3153 | 3153 | 3153 | 3153 | 3153 | 3153 |

Should the output of the Power Plant in any twelve month period commencing on the Commercial Operation Date and each subsequent twelve month period(s) thereafter (the "Annual Period") during the term of the Agreement be less than the GMO, UTC Power agrees to provide the Customer a cash rebate equal to three percent (3%) of the annual Maintenance Services Payment for each one percent (1%) of shortfall from the GMO. The dollar amount of any cash rebates due to the Customer shall be calculated once at the end of each Annual Period and paid to Customer within thirty (30) days of UTC Power's confirmation of the amount due. Notwithstanding anything herein to the contrary, the maximum allowable credit under this section for any Annual Period shall not exceed the annual Maintenance Services Payments actually received by UTC Power for the corresponding Annual Period. In the event that the building load demand falls below 400kwh and the Power Plant is capable of providing 400kwh to Customer's site, the output shall be calculated as if the Power Plant was operating at full capacity for the purposes of this guarantee.

Should the actual output of the Power Plant in an Annual Period be greater than GMO, the number of MWh of Output above the GMO shall be credited to UTC Power (referred to herein as the "Performance Bank"). UTC POWER will have the right to apply any then current Performance Bank to offset a shortfall in the GMO in any Annual Period for the System.

Because technical expertise is critical in meeting the GMO above, this Guarantee is conditioned upon maintenance, service and repairs to the System being provided exclusively by UTC Power (directly or through a UTC Power authorized service provider) in accordance with UTC Power's maintenance services, statement of work and terms and conditions as described in the Agreement. In the event that the Agreement is terminated, the Guarantee shall terminate and be of no further force or effect. Customer must provide and maintain a dedicated Broadband/DSL connection with static IP (or other continuous connection approved by UTC Power) for UTC Power's monitoring system in order to enforce this

Guarantee. The first Annual Period under this Guarantee shall commence upon the date UTC Power determines that the System has achieved Commercial Operation Date.

UTC Power will not be responsible for any periods during which the System is not operating due to (a) site issues not related to the System, including but not limited to issues related to electrical load or building system design or malfunction; (b) System or Power Plant issues arising from improper installation (if not installed by UTC Power) or operation, abuse, neglect, vandalism, weather, rust, the effects of corrosive and/or erosive environments or fuels, inadequate or incorrect fuel supply, quality or pressure, operation of the System outside the operating specifications defined by UTC Power in the applicable operation and maintenance manual, or modifications, materials or services not executed or provided by UTC Power or a UTC Power authorized service provider; (c) System or Power Plant issues due to maintenance required that is not covered under the Scope of Services or not paid for by Customer, (d) Power Plant Downtime during periods when the monitoring system is not functioning due to the failure to maintain a dedicated Broadband/DSL connection with static IP (or other continuous connection approved by UTC Power); (e) Customer-elected shutdowns of the Power Plant or the System; (f) Customer deviation from an approved Grid-Independent Load Profile; or (g) any other cause beyond UTC Power's direct control. Any such periods shall not be included in the calculation of Power Plant Downtime for the purposes of this Guarantee.

This Output Guarantee and the remedies expressly provided herein (i) are exclusive and in lieu of all other output, consumption, availability or performance warranties or guarantees of any kind, whether statutory, written, oral, express or implied, and (ii) are Customer's sole and exclusive remedy and UTC Power's sole and exclusive obligation with respect to output, consumption, availability or performance of the System. UTC Power shall not be responsible under any warranty, guarantee or other obligation for rebates, credits, repairs, replacements or indemnification due to abuse, vandalism, acts of terrorism or war, fire, lightning, earthquake, flood, storm, or other acts of God, neglect, modifications, materials or services not executed or provided by UTC Power or its subcontractors, employees or agents, use in a physical environment other than the site proposed in this Agreement, or installation or use of the System not in accordance with the intended use of the System. No rights under this Guarantee shall be assignable or transferable to any third-party, except on the written consent of UTC Power.

Under no circumstances shall UTC Power be liable for any special, incidental, indirect or consequential damages of any nature whatsoever, including without limitation, business interruption, lost profits, revenues or sales, or increased costs of production, whether such claims are based in contract, warranty or tort, including negligence, or any other legal theory or principle.

## **RENEWABLE ENERGY CREDITS AND OTHER ATTRIBUTES**

A) **Definition.** Following delivery of the Equipment, the Parties agree that any "Attributes", as defined in the following sentence, shall accrue without any further action by the Parties to Customer or Customer's appointed agent identified in writing, if any, and to the extent necessary, all right, title and interest in and to and possession of the Attributes shall be transferred by UTC Power to Customer or Customer's appointed agent. Attributes shall mean for purposes of this Contract any and all (1) renewable energy allowances, certificates or credits, (2) emissions allowances, certificates or credits, (3) alternative fuel or energy tax credits, (4) payments or credits by any third party for capacity, ancillary services, or any other payments or credits except for energy, and (5) other economic or environmental attributes or incentives, arising at any time from the purchase, ownership, installation, use or operation of the Equipment or otherwise associated with the Equipment. Where necessary or advisable in order to accomplish the purposes of this section, UTC Power shall, at the request of Customer or Customer's appointed agent from time to time, (i) execute and deliver to Customer or Customer's appointed agent such instruments, regulatory filings and similar documents that are provided to UTC Power by Customer or Customer's appointed agent, (ii) transfer the Attributes to Customer or Customer's appointed agent in any regional or other settlement, accounting or tracking system and (iii) make the Equipment available for inspection, auditing, metering and remote monitoring. In the event that Customer transfers any right, title or interest in the Equipment to a third party, including any affiliate or successor in interest (collectively, a "Future Owner"), UTC Power covenants that upon request of Customer, UTC Power will ensure such Future Owner has the benefits of this section.

B) **Agent and Attributes Payments.** Customer hereby appoints UTC Power as its agent for the purposes of selling any and all Attributes arising from the use of the Equipment. Customer shall execute all documents reasonably

requested by UTC Power to enable UTC Power to sell any Attributes. For the service of selling the Attributes, UTC Power shall retain a fee equal to 15% of the gross sales price of such Attributes. The remaining amount, after deductions for taxes, fees and other expenses necessary for the sale of the Attributes shall be paid to Customer on a quarterly basis during the Term.

## **CUSTOMER'S RESPONSIBILITIES**

### **A) Equipment, Installation and Start-Up Services**

Unless specifically provided otherwise in the Statement of Work attached hereto, Customer shall:

- Pay the Contract Price and other sums required to be paid by it to UTC Power in accordance with this Contract;
- Provide all information describing the physical characteristics of the Site, including surveys, electrical drawings, site evaluations, aerial photographs, legal descriptions, existing conditions, subsurface and environmental studies, reports and investigations;
- Customer shall ensure the quality of gas and make-up water supplied to the Equipment falls within the operating tolerances of the Equipment as outlined in the PureCell Model 400 Product Data and Applications Guide document provided by UTC Power, as revised from time to time. Customer acknowledges that such document shall be provided for informational purposes and Customer's warranty compliance only, and that the obligations and warranties of UTC Power are not supplemented and amended by such document;
- Provide timely review and approval of the site design / construction drawings and not withhold approval to construct or commission based on failure to review and approve such drawings;
- Provide UTC Power's and its subcontractors' workers safe access to the Site and a safe place for performing the Work, free of hazardous substances, toxic materials, and all unsafe working conditions. UTC Power reserves the right to discontinue the Work whenever this provision is violated. Customer agrees to provide UTC Power with current and accurate as built electrical drawings of the Site. Delay resulting from any cause beyond Customer's or UTC Power's reasonable control shall extend the time for completion of the Work;
- Provide UTC Power with unrestricted access to the Site and reasonable access to the Customer's applicable records and personnel during UTC Power's normal working hours. UTC Power may start and stop Customer's systems incidental to the Work, as reasonably arranged with Customer's representative and Customer shall permit use of building services including, but not limited to: water, elevators, receiving dock facilities, electrical service and local telephone service;
- Keep areas adjacent to the Site and Work free of extraneous material, move any stock, fixtures, walls or partitions that may be necessary to perform the Work and ensure proper protection of the Equipment and other materials from debris and other hazards and materials at the Site;
- Promptly notify UTC Power of any unusual operating conditions at the Site;
- Be responsible for identification, detection, abatement, encapsulating or removal of asbestos, products or materials containing asbestos, other hazardous materials, mold, fungi, mildew, or bacteria and provide UTC Power with all information requested in order to comply with OSHA and other applicable Employee, Health and Safety rules and regulations, including but not limited to information relating to the energy-control procedures applicable at the Project Location under 29 CFR 1910.147, (The control of hazardous energy (lockout/tagout));

- Provide suitable protected storage space at the Site for tools and materials belonging to UTC Power's personnel;
- If Customer is not ready to accept delivery of Equipment on the date of anticipated delivery, Customer shall give UTC Power sufficient notice of a local point where Customer will accept delivery, and Customer shall reimburse UTC Power for all costs incurred due to extra handling and storage;
- Pay for and provide all analyses, calculations and setpoints, fuel, water, sewer, drains, electricity and other utilities that are required for the performance of the Work;
- Secure and pay for all approvals (including interconnection approval), certificates, permits and licenses in a timely fashion that are required to perform the Work, and Customer shall deliver copies of such approvals, certificates, and licenses to UTC Power on a timely basis;
- Do all painting, cutting and patching of walls, floors or partitions, together with any repairs made necessary thereby, or caused by oversight or mistake; and
- Indemnify, defend and save UTC Power harmless against all liability arising out of Customer's failure to carry out any of Customer's Responsibilities regarding Equipment, Installation and Start-up Services.

**B) Maintenance Services and Replacement Parts Post Commercial Operation Date**

Unless specifically provided otherwise in the Scope of Services attached hereto, Customer shall:

- Pay the Maintenance Services Price and other sums required to be paid by it to UTC Power in accordance with this Contract;
- Provide UTC Power's and its subcontractors' workers safe access to the Site and a safe place for performing the Maintenance Services, in conformance with all applicable laws, free of Hazardous Materials (as defined in and in accordance with the section entitled HAZARDOUS MATERIALS below), and all unsafe working conditions;
- Provide UTC Power with reasonable access to the Site during UTC Power's normal working hours in each case to the extent necessary to perform UTC Power's obligations hereunder. UTC Power may request start and stop of Customer's systems incidental to the Maintenance Services to the extent necessary for the performance of Maintenance Services, and Customer understands that failure to provide such start and stop may delay such Maintenance Services. Customer shall permit the reasonable use of building services including, but not limited to: water, elevators, receiving dock facilities, electrical service and local telephone service;
- Provide adequate water treatment (applicable to absorption chiller equipment only, if any);
- Provide onsite storage of all required nitrogen and water treatment media in a safe and accessible environment for UTC Power and its subcontractors;
- Provide and maintain a dedicated Broadband/DSL connection with static IP (or other continuous connection approved by UTC Power) for UTC Power's remote monitoring service;
- Comply with all customer obligations as defined in UTC Power's Product Data and Applications Guide, Owner's Manual and Installation Manual;
- Keep areas adjacent to the Equipment free of extraneous material, move any stock, fixtures, walls or partitions that may be necessary to perform the Maintenance Services and provide reasonable protection of the Equipment and other materials from debris and other hazards and materials at the Site;

- Be responsible for identification, detection, abatement, encapsulating or removal of asbestos, products or materials containing asbestos, other hazardous materials, mold, fungi, mildew, or bacteria and provide UTC Power with all information requested in order to comply with OSHA and other applicable Employee, Health and Safety rules and regulations, including but not limited to information relating to the energy-control procedures applicable at the Project Location under 29 CFR 1910.147, (The control of hazardous energy (lockout/tagout));
- Customer shall comply with all customer obligations as defined in UTC Power's Product Data and Applications Guide, Owner's Manual and Installation Manual;
- Indemnify, defend and save UTC Power harmless against all liability arising out of Customer's failure to carry out any of Customer's Responsibilities regarding Maintenance Services and Replacement Parts Post Commercial Operation Date.

### **EQUIPMENT CONDITION AND RECOMMENDED MAINTENANCE SERVICES**

Should UTC Power determine the need for repairs or replacement outside the scope of UTC Power's obligations under this Contract, UTC Power will provide Customer in writing a "Field Service Report" including recommendations for corrections and the price for repairs in addition to this Contract. In such event where UTC Power recommends certain services and Customer does not elect to have such services properly performed in a timely fashion, UTC Power shall not be responsible for any Equipment or control failures, operability or any long-term damage that may result from such failure to have such services performed. UTC Power, at its option, will either (1) continue to maintain Equipment and/or controls to the best of its ability, without any responsibility to Customer for the performance of the Equipment, or (2) shut down the Equipment if UTC Power determines continued operation poses a risk to the Customer, UTC Power or Customer employees, third parties, the environment, or significant portions of the Equipment.

### **HAZARDOUS MATERIAL**

Hazardous Material is any substance or material identified now or in the future as hazardous under any federal, state or local law or regulation, or any substance or material which may be considered hazardous or otherwise subject to statutory or regulatory requirements governing handling, disposal and/or clean up. If UTC Power becomes aware of the presence of Hazardous Materials on the Site (a "Hazardous Materials Condition"), UTC Power shall notify Customer. UTC Power shall not be obligated to commence or continue Work or Maintenance Services until all known or suspected Hazardous Material related to such Hazardous Materials Condition discovered at the Site has been removed, or rendered or determined to be harmless by Customer as certified by an independent testing laboratory and approved by the appropriate government agency. If UTC Power incurs additional costs and/or is delayed due to the presence or remediation of a Hazardous Materials Condition not caused by UTC Power or its subcontractors, UTC Power shall be entitled to an equitable adjustment in the prices set forth herein and/or date of substantial completion for the Work or Maintenance Services. Customer shall indemnify, defend and hold harmless UTC Power and its agents, directors, officers, servants, employees and subsidiaries (collectively "UTC Power Indemnities") from and against all claims, damages, losses and expenses, and reasonable attorneys' fees and expenses, arising out of, resulting from, relating to or in any way attributable to any Hazardous Material that is now, has ever been, or will ever be at the Site (other than any Hazardous Material that has been brought to the Site by UTC Power or its subcontractors or suppliers in connection with the Work or Maintenance Services).

Material Safety Data Sheets (MSDS) as required by law and pertaining to materials or substances used or consumed in the performance of the Work shall be maintained at the Site by UTC Power and made available to Customer.

### **UNKNOWN CONDITIONS**

The Parties acknowledge that UTC Power has not been provided with final site surveys, site reports or property descriptions or with the site interconnect or similar agreements, and that any changes required due to site conditions or the requirements of such agreements shall entitle UTC Power to an equitable adjustment to the Work, Contract Price, project timeline, if any, or other terms and conditions of this Contract, if any, that would result from the changed Work. If, in the performance of the Work, UTC Power finds latent, concealed, or subsurface physical conditions which materially differ

from the conditions UTC Power reasonably anticipated, or if physical, chemical, environmental, seismic or electrical conditions are materially different from those normally encountered and generally recognized as inherent in the kind of work provided for in this Contract, the Work, the Contract Price, the terms and conditions of this Contract, and/or target date for the Commercial Operation Date shall be equitably adjusted by a change order within a reasonable time after the conditions are first observed.

### **RECOMMENDED ADDITIONAL WORK**

In the event UTC Power recommends certain work (that is not included in the Statement of Work herein) and Customer does not elect to have such work properly performed in a timely fashion, UTC Power shall not be responsible for any equipment or control failures, operability problems, harms or damage that may result. Customer agrees that UTC Power at its option, may (i) continue to perform its agreed to Statement of Work to the best of its ability, without any responsibility, or (ii) terminate this Contract, cease Work and transfer any title to the Equipment that remains with UTC Power to the Customer upon Customer's payment, in full, to the UTC Power of all amounts due under the Contract allocable to the Equipment plus all Work done by UTC Power up to the date of such termination, or (iii) terminate this Contract, disconnect and take possession and title to the Equipment at Customer's expense and return the Contract Price applicable to the Equipment to Customer, or (iv) negotiate and agree to a change order with Customer in accordance with the terms of this Contract.

### **INSURANCE**

Both UTC Power and Customer agree to maintain the following insurance during the term of the Agreement with the following limits: (a) Comprehensive General Liability Insurance covering bodily injury and property damage with a limit of \$2,500,000 per occurrence and \$5,000,000 general aggregate; (b) Statutory Workers' Compensation and Employer's Liability Insurance for a limit of \$1,000,000 each accident, \$1,000,000 each employee-disease, and \$1,000,000 policy aggregate-disease; and (c) Automobile Liability covering bodily injury and property damage with a combined single limit of \$1,000,000 per occurrence. The parties may satisfy these limits through a combination of primary and umbrella coverage, a program of self-insurance, through a Joint Powers Association (JPA) or any combination, thereof, as necessary. The parties shall exchange certificates of insurance upon execution of this Agreement.

Customer shall obtain and maintain "Builder's Risk" Property policy or an "All Risk" Property policy in a form acceptable to UTC Power for the full cost of replacement, at the time of any loss, up until the Commercial Operation Date, whichever is deemed appropriate by owner. All Property insurance shall be provided by companies which carry an A. M. Best Rating of no less than A-, shall be endorsed naming UTC Power as Loss Payee and to provide UTC Power with thirty (30) days written notice prior to any material change or cancellation of coverage. Customer will produce to UTC Power a certificate of insurance evidencing that all required insurance is in place upon execution of this Agreement and each following year upon renewal of coverage for the Term of this Agreement and any extensions thereof. The proceeds of any insurance payable with respect to loss of or damage to the System may, at UTC Power's sole option, be used to replace, restore or repair the System. This insurance shall include "all risk" insurance for physical loss or damage including without duplication of coverage, at least: theft, vandalism, malicious mischief, transit, materials stored off-site, collapse, temporary buildings, debris removal, flood, earthquake and testing. Customer shall increase limits of coverage, if necessary, to reflect estimated replacement cost. The insurance policy shall be written without a co-insurance clause. Customer shall be solely responsible for deductible amounts.

### **INDEMNIFICATION**

UTC Power shall indemnify, defend and hold harmless Customer for bodily injury (including death) and damage to tangible property to the extent caused by the negligence or willful misconduct of UTC Power or its subcontractors. Customer shall indemnify, defend and hold harmless UTC Power for bodily injury (including death) and damage to tangible property to the extent caused by the negligence or willful misconduct of Customer.

### **FORCE MAJEURE**

Under no circumstances shall either Party be liable for any loss, damage or delay due to any cause beyond such Party's reasonable control, including but not limited to acts or omissions of government, delays in receipt or export or import licenses or permits, strikes, lockouts, labor disputes, transportation shortages, fire, explosion, theft, weather damage,

flood, earthquake, riot, severe weather, civil commotion, war, terrorism, malicious mischief, or acts of God (“Force Majeure Events”), but only so long as (a) such Force Majeure Events could not have been reasonably anticipated by such Party and cannot be reasonably avoided or circumvented by such Party, (b) such Party promptly notifies the other Party of such Force Majeure Events, and (c) uses diligent efforts to mitigate the effect of such Force Majeure Events. The time for performance of this Contract shall be extended for a period equal to any time lost by reason of such delay. UTC Power shall not be obligated to incur any expenses in connection with such delay to recover any lost time, unless so directed in writing by Customer and Customer hereby agrees to pay UTC Power for all such expenses.

### **DELIVERY, TITLE AND RESERVATION OF RIGHTS**

UTC Power shall arrange shipping and transportation for Customer’s account from the place of manufacture or supply, as applicable, to the Site. Customer shall have title, bear all risks of loss associated with transport and be responsible for all costs after delivery of the Equipment at the place of manufacture or supply. UTC Power shall arrange for shipping and transportation by carrier from the place of manufacture or supply, as applicable, to the Shipping Location. UTC Power will ship the Equipment in a manner consistent with general industry practice for shipping these kinds of goods so as to minimize any deterioration in transit. Should it be necessary to ship the Equipment in a disassembled state, UTC Power shall ship the Equipment in the largest units possible consistent with expedient transportation of the Equipment. UTC Power does not guarantee a particular date for shipment or delivery. Customer is responsible for unloading the Equipment at the Shipping Location. Customer is responsible for noting any irregularities or damage at the time of unloading and for designating such irregularities on the shippers’ bill of lading.

### **CUSTOMER’S CLAIMS**

No claim of Customer related to an alleged failure by UTC Power to meet any requirement of this Contract shall be valid unless, prior to Customer incurring any cost related to such claim, Customer notifies UTC Power in writing, in detail of such alleged failure and Customer then allows UTC Power a reasonable time to correct any such failure verified by UTC Power. Any suits arising from the performance or nonperformance of UTC Power, whether based upon contract, negligence, strict liability or otherwise, shall be brought within one (1) year from the date the claim arose.

### **LIMITATION OF LIABILITY**

#### **A) Equipment, Installation and Start-Up Services**

The price allocable in this Contract to any Equipment (including all options) or Work alleged to be the cause of any loss or damage shall be the ceiling limit on the aggregate liability of UTC Power, whether founded in contract or tort (including negligence), arising out of, or resulting from, (i) this Contract or the performance or breach thereof, (ii) the design, manufacture, delivery, sale, installation, repair or replacement of any such Equipment or Work, or (iii) the use of any such Equipment. Under no circumstances shall UTC Power be liable for any special, incidental, indirect or consequential damages of any nature whatsoever, including without limitation, business interruption, lost profits, revenues or sales, or increased costs of production, whether such claims are based in contract, warranty or tort, including negligence, or any other legal theory or principle.

#### **B) Maintenance Services and Replacement Parts Post Commercial Operation Date**

The price allocable in this Contract to any Maintenance Services alleged to be the cause of any loss or damage shall be the ceiling limit on the aggregate liability of UTC Power, whether founded in contract or tort (including negligence), arising out of, or resulting from this Contract or the performance or breach thereof. Under no circumstances shall UTC Power be liable for any special, incidental, indirect or consequential damages of any nature whatsoever, including without limitation, business interruption, lost profits, revenues or sales, or increased costs of production, whether such claims are based in contract, warranty or tort, including negligence, or any other legal theory or principle.

### **SOFTWARE LICENSE**

If software is provided in connection with this Contract, it shall be licensed and not sold. Unless otherwise stated, EISC Rev. 08.12 2011 UTCP CONFIDENTIAL Page 16 of 28

Customer will receive one license per contract and such license shall be nontransferable. Except as provided herein, Customer will not transfer, sublicense or copy any such software or use it in connection with any equipment other than the Equipment provided hereunder, and Customer may be required to enter into a separate software license with respect to such software. Notwithstanding any other term of this Contract, UTC Power shall not be obligated to deliver any software to the Customer unless and until Customer enters into the software license applicable to the software. UTC Power will not be obligated to deliver software to any person other than Customer or Customer's designated and approved agent. Customer hereby agrees to be liable for its agents' compliance with the terms of any software license as outlined therein. UTC Power assumes no liability and makes no warranties or representations with respect to any third party software related to the Equipment. Any liabilities, warranties or representations with respect to software licensed to Customer from UTC Power shall be established solely by the express provisions of the applicable software license terms and conditions, if any, between Customer and UTC Power. If the Equipment or any part of the Equipment incorporates computer software, the Parties agree that Customer may transfer the license to use such software only as part of a transfer of ownership of the Equipment, in which case the license to use such software solely in connection with the Equipment shall be automatically assigned to the transferee of the Equipment.

### **ASSIGNMENT**

Neither Party may assign any of its rights or obligations under this Contract, except as otherwise expressly provided herein or with the written consent of the other Party, and any assignment made without such consent shall be null and void; provided, however, UTC Power may, upon written notice to Customer, assign UTC Power's rights and obligations without such consent, to an entity which acquires all or substantially all of UTC Power's assets or which controls, is controlled by or is under common control with UTC Power.

### **TERMINATION**

In the event of a material breach by either Party in the performance of the breaching party's duties, obligations or undertakings to the non-breaching party under this Contract, the non-breaching party will have the right to terminate the Work and Maintenance Services under this Contract by giving written notice to the breaching party of the specific breach involved; provided that the breaching party shall have thirty (30) days to cure such breach prior to such termination taking effect. Upon termination taking effect, UTC Power shall be entitled to receive payments for any Work and Maintenance Services performed in accordance with the terms of this Contract, for all costs incurred prior to such termination, and for all costs related to termination and settlement with its subcontractors and suppliers. If such termination is initiated by Customer, UTC Power shall have the option to return the Contract Price applicable to the Equipment and disconnect the Equipment at UTC Power's expense.

## **NO WAIVER; SEVERABILITY; HEADINGS; CONFIDENTIALITY OF BUSINESS TERMS**

The failure of either party to insist on any right, or to invoke or elect any remedy, shall not be construed as a waiver of that right, remedy or election in the absence of a writing signed by the waiving party. The invalidity of one or more of the phrases, sentences, clauses, or sections contained in this Contract shall not affect the validity of the remaining portions. Section headings in this Contract are for reference purposes only and shall not affect in any way the meaning or interpretation of this Contract. The business terms of this Contract for the Maintenance Services, specifically including but not limited to pricing, shall be held in confidence by Customer. Customer shall refrain from disclosing any such Maintenance Services business terms included within this Contract to any third party.

## **ENTIRE AGREEMENT**

This Contract, including all other documents attached hereto and expressly made a part hereof, and all changes or amendments hereto shall constitute the entire agreement between the Parties with respect to the matters set forth herein, with all prior proposals, representations, quotations, agreements and understandings, written or oral, superseded hereby. It is agreed that the Parties do not intend to create a right in any third party with respect to the section of the Contract entitled LIMITATION OF LIABILITY, by entering into this Contract. The terms and conditions of this Contract, including all documents, if any, expressly incorporated herein, and any attachment to this Contract expressly referenced herein, shall exclusively govern the Parties' performance hereunder and any terms or conditions in addition to or different from this Contract, including without limitation any terms or conditions provided in any purchase order or similar document related to the Equipment, the Work, or the Maintenance Services which are not expressly incorporated herein, shall have no effect. Unless expressly stated otherwise, the provisions of this Contract shall have precedence over the terms of any other Contract documents, if any exist, and shall govern in the event of any inconsistency with the terms included in any attachments, including appendices and schedules, that are made a part of this Contract. This Contract shall not be changed or amended, except in a writing signed by the Parties hereto.

## **COMPLIANCE WITH LAWS; EXPORT CONTROL; GOVERNING LAW**

UTC Power and Customer will each comply with all federal and state laws applicable to the performance of their respective obligations hereunder, including UTC Power's manufacture of the Equipment. The Parties shall also comply with all U.S. and other export control laws and regulations associated with or arising from the sale, delivery, or subsequent use of equipment, data and documentation, including, without limitation, restrictions on the re-export of equipment, data and documentation. The rights of all parties under this Contract and the construction and effect of every provision hereof shall be subject to and construed according to the laws of the State of California, including the Uniform Commercial Code, and of the United States of America, excluding the United Nations Convention on the International Sale of Goods.

## **FEDERAL ACQUISITION REGULATIONS (FAR)**

The components, equipment and services proposed by UTC Power are commercial items as defined by the Federal Acquisition Regulations ("FAR") and the prices in any resulting contract and in any change proposal are based on UTC Power's standard commercial accounting policies and practices, which do not consider any special requirements of U.S. Government cost principles and do not meet the requirements of Part 31 of the FAR, Office of Management and Budget Circular A-87, or any similar procurement regulations. UTC Power agrees only to perform a contract for the sale of a commercial item on a fixed-price basis. In addition, UTC Power will not agree to submit or certify to any cost or pricing data nor will UTC Power agree to any requirements to establish price reasonableness under FAR Part 15 or any such similar regulations. In stating its position, UTC Power refers to FAR Part 12 "Acquisition of Commercial Items." UTC Power shall not be bound by any additional Federal Acquisition Regulations (FARs), DFARS, CFRs, OMB Circulars, or any other federal government procurement regulations of any kind which apply to this proposed order, except the following: Equal Opportunity (FAR 52.222-26); Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (FAR 52.222-35); Affirmative Action for Workers with Disabilities (FAR 52.222-36).

## **PROJECT MANAGEMENT; MANNER OF WORK**

UTC Power shall assign one (1) member of its company to act as Project Manager for the Work. UTC Power agrees that all Work shall be performed by and under the supervision of skilled, experienced persons acceptable to Customer.

UTC Power agrees as follows:

- When on the Site premises, or with Site guests or patrons, all employees and agents of UTC Power shall wear proper identification and shall conduct themselves in a manner consistent with the standards, quality and image of the Site.
- All entries into the property and exits from the property shall be through the entrance designated by Customer. All employees and agents of UTC Power shall sign in at the security office, as required, before starting work. They shall be given a contractor badge, which must be worn at all times while on the property. The badge shall be returned at the end of each day. Each employee and agent of UTC Power shall sign out when leaving the Site.
- All employees and agents of UTC Power shall check in with the Site's Engineering Department before beginning any work.
- Unless otherwise approved by Customer, all travel through the property shall be by way of the back of house corridors and service elevators. Any travel or Work to be carried out in public spaces shall be pre-approved by the Site's Director of Engineering or such other individual specifically authorized by Customer.
- Materials shall be unloaded at the loading docks or at a staging area approved in advance by Customer. Unless otherwise approved by Customer, the front entrance of the Site shall not be used as a loading dock.
- The Site's Director of Engineering shall designate equipment staging areas and wash-down sites.
- Customer may require UTC Power to remove from the Site such employees and agents of UTC Power as Customer reasonably deems incompetent, careless, or otherwise objectionable, or whose continued assignment to the Site is contrary to Customer's best interest.
- UTC Power's employees and agents shall be dressed appropriately when on the property. Shirts, long pants and shoes shall be worn at all times. Tank tops and excessively worn or torn clothes are not acceptable. All employees or agents of UTC Power shall be identified by either a company uniform or T-shirt or by a nametag supplied by the Site's security office.
- All public guest areas at the Site including, but not limited to, any pool or restaurants, are off limits to UTC Power and its employees and agents when working at the Site, unless the Work being performed require that such areas be occupied.
- The Site's Director of Engineering shall designate rest rooms for UTC Power use. Unless otherwise approved by Customer, the public rest rooms at the Site are not to be used by the UTC Power's employees or agents.

## **LIENS**

Upon receipt of payment in accordance with payment terms hereunder, UTC Power shall keep the premises free and clear of any and all liens by UTC Power, including, but not limited to, mechanics or materials liens, resulting from work done by or for UTC Power or material delivered to the Site.

## **SUBCONTRACTORS**

UTC Power shall bind every subcontractor to, and shall require every subcontractor to be bound by, the terms of this Contract as far as applicable to the subcontractor's portion of the Work and Maintenance Services. UTC Power agrees to pay each subcontractor, upon payment by Customer, the amount allowed to UTC Power on account of such subcontractor's portion of the Work and Maintenance Services. Both Parties agree to pay the bills of their respective supplier promptly. Each Party agrees to protect to interest of the other as described in this Section by not permitting any attachments to the Equipment of liens, encumbrances or claims for labor or material and to protect and hold the other harmless from all such claims, liens and encumbrances growing out of the manufacture, assembly, transit and installation of the Equipment.

## **EQUAL OPPORTUNITY EMPLOYER**

UTC Power shall comply with Executive Order 11246, as amended, which is administered by the United States Department of Labor, Office of Federal Contract Compliance Programs, with the relevant rules, regulations and orders of the Secretary of Labor pertaining thereto, and with all other applicable federal, state and local non-discrimination, non-segregation, affirmative action, veterans employment, and handicapped employment laws, rules, regulations and orders (collectively, the "EEO/AA Requirements"). UTC Power shall provide upon request of Customer or any appropriate federal, state or local regulatory body information and reports required by the EEO/AA Requirements. UTC Power shall include the provisions of this Section in every subcontract or purchase order so that such provisions shall be binding upon each contractor, subcontractor or vendor performing services or providing materials relating to the Work and Maintenance Services.

## **CONFIDENTIALITY**

- A) **Terms of the Contract.** Neither Party shall disclose the terms of this Contract to a third party (other than such Party's and its affiliates' employees, lenders, counsel, accountants or consultants) except in order to comply with any applicable law, order, regulation or rule; provided, however, that each Party shall give prior notice to the other Party of any proceeding of which it is aware that may result in such disclosure and the Party subject to such proceeding shall use reasonable efforts to prevent or limit the disclosure; and further provided that (i) each Party is deemed to have consented to such disclosure of the terms of this Contract as is necessary to comply with applicable regulatory reporting and filing requirements and (ii) the Party that is subject to such requirements shall give prior notice to the other Party of such disclosure.
- B) **Confidential Information.** Each Party shall hold in confidence and shall not directly or indirectly use or disclose to any person or entity, except as permitted herein, either during the term of this Contract or at any time thereafter, any Confidential Information of the other party. "Confidential Information" shall mean information, including a formula, pattern, compilation, program device, method, technique, or process, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy. Notwithstanding the foregoing, however, "Confidential Information" does not include information that: (i) is or becomes generally available to the public through no wrongful act of the recipient of such information or its representatives; or (ii) was developed independently by the recipient prior to it being provided to the recipient and without the utilization of any Confidential Information therefrom; or (iii) is or becomes available to the recipient on a non-confidential basis from a source other than the other Party or its representatives; provided that such source is not known by the recipient to be subject to any other confidentiality obligation to the other Party. Each Party shall use the other Party's Confidential Information only for the purpose carrying out its obligations under this Contract, and for no other purpose whatsoever. Each Party shall limit the use and circulation of the Confidential Information to its representatives having an actual and legitimate need to know and only to the extent reasonably necessary to assist such Party in its use of the Confidential Information as permitted herein, and who are informed of the confidential nature of the Confidential Information and are required to keep it confidential in accordance with this Section.
- C) **Remedies.** The Parties shall be entitled to all remedies available at law or in equity to enforce, or seek relief in connection with, this confidentiality obligation, including the right to obtain injunctive relief (without the necessity of posting a bond or proving any damages); provided, however, that all monetary damages shall be limited to actual direct damages (subject to the limitation on monetary damages in the section titled LIMITATION OF LIABILITY) and a breach of Subsection (A) above shall not give rise to the right to suspend or terminate the Contract.

## **PUBLIC STATEMENTS**

UTC Power may make or authorize any news releases, advertisements or similar public statements that relate to (i) the existence of this Contract and the Equipment hereunder and (ii) the location of the Equipment as it may choose; provided, however, that UTC Power shall not make or authorize any news releases, advertisements or public statements relating to all other information contained hereunder without the prior written consent of the Customer, which shall not be unreasonably withheld by Customer.

**APPENDIX A**

**BILL OF MATERIALS**

**PART I – EQUIPMENT**

| <b>PureCell® Model 400 Equipment</b>        | <b>Part #</b> | <b>QNTY</b> |
|---|---------------|-------------|
| PureCell® Model 400, Natural Gas, 480V/60Hz | FC71640-0001  | 1           |
| Remote Monitoring System (RMS)              | FC74227-01    | 1           |
| Air cooling module (CM)                     | FC68997-01    | 1           |
| Chimney, Elbow                              | FC79221-01    | 1           |
| Cap, Rain Diverting                         | FC79222-01    | 1           |
| Hardware kit, Short Chimney Installation    | FC78082-01    | 1           |
| Nitrogen manifold assembly, free standing   | FC77954-01    | 1           |
| Tie down bracket (min. Qty 4)               | FC69802-01    | 4           |
| Heat Recovery Monitoring (HRM) System       | N/A           | 1           |

**PART II – ANCILLARY EQUIPMENT (if applicable)**

| <b>Ancillary Equipment</b>                  |     |   |
|---|-----|---|
| Absorption Chiller - 50 Ton Chiller         | TBD | 1 |
| Dry Cooling Tower (for 50 Ton Chiller - CA) | TBD | 1 |

## **APPENDIX B**

### **STATEMENT OF WORK**

#### **Equipment and Installation STATEMENT OF WORK Norco College**

#### **1. UTC Power Responsibilities**

##### **1.1. Site Design and Permits**

1.1.1. Construction Drawings. Provide the following site-specific stamped construction drawings:

1.1.1.1. Site Plan

1.1.1.2. Structural Plan, Sections and Details

1.1.1.3. Mechanical Flow Diagram

1.1.1.4. Mechanical Layouts, Sections and Details

1.1.1.5. Mechanical Specifications, Schedules and Sequence of Operations

1.1.1.6. Electrical One Line Diagram

1.1.1.7. Electrical Three Line Diagrams

1.1.1.8. Electrical Layouts, Sections and Details

1.1.1.9. Electrical Specifications, Schedules and Sequence of Operations

1.1.2. Permits. Prepare documentation, file and pay for all required permits associated with the installation of the fuel cell (\$5,000 allowance is included in contract price), including:

1.1.2.1. Local construction permits

1.1.2.2. Air permits

1.1.2.3. Zoning permits

##### **1.2. Utility Interconnect Application**

1.2.1.1. Prepare technical documentation and provide witness test plan for utility interconnect application. Support interconnect witness test.

##### **1.3. Equipment Delivery and Rigging**

1.3.1. Coordinate the ship, rig, and set of UTC supplied equipment (per Appendix A).

1.3.2. Coordinate the ship, rig, and set of all other required equipment per project plans and specifications for a complete installation.

##### **1.4. Installation**

1.4.1. Installation Management. Provide complete installation management services including sub-contractor selection, coordination of trades, project scheduling, and progress reporting.

1.4.2. Site Work. Prepare site for equipment pad and fuel cell connections per project-specific requirements.

1.4.3. Equipment Pad. Supply and install a concrete pad for fuel cell and ancillary equipment.

1.4.4. Site Enclosure. Supply and install bollards around fuel cell with suitable access for service.

1.4.5. Cooling Module. Supply and install a fuel cell cooling module and associated piping and wiring. Distance from the fuel cell to the cooling module is not to exceed 20 feet.

- 1.4.6. Natural Gas System. Supply and install natural gas meters, regulator, and piping. Distance from the fuel cell to the natural gas system is not to exceed 50 feet.
- 1.4.7. Nitrogen System. Provide and install nitrogen supply manifold, bottle racks, and piping.
- 1.4.8. Heat Recovery Systems.
  - 1.4.8.1. High-grade system. Supply and install high-grade heat recovery system to interface with absorption chiller including piping, pumps, valves, expansion tanks, and local controls. Distance from the fuel cell to the high-grade interface of absorption chiller is not to exceed 30 feet.
  - 1.4.8.2. Absorption chiller and cooling tower. Furnish and install absorption chiller including cooling tower, piping, chilled water pumps, condenser water pumps, and local controls. Distance from the chiller to campus chilled water interface is not to exceed 30 feet.
  - 1.4.8.3. Low-grade system. Furnish and install low-grade heat recovery system to interface with campus heated water loop including interconnect piping, pumps, valves, expansion tanks, and local controls. Distance from the fuel cell to the low-grade interface is not to exceed 30 feet.
- 1.4.9. Make-up Water System. Supply and install make-up water system to fuel cell from customer supply. Distance from the fuel cell to the make-up water interface is not to exceed 50 feet.
- 1.4.10. Electrical Grid-Connect System. Supply and install electrical system for supplying grid-connect electrical power to building distribution panel including wire, conduit, and circuit breaker. Distance from the fuel cell to the grid-connect interface is not to exceed 60 feet.
- 1.4.11. Electrical Utility Interface and Metering. Supply and install required protection equipment and metering for utility interconnection.
- 1.4.12. Remote Monitoring System (RMS). Supply and install RMS and associated power and communications wiring.
- 1.4.13. Heat Recovery Monitoring (HRM) System. Supply and install HRM system and associated power and communications wiring.

## **1.5. Equipment Start-Up**

- 1.5.1. Flush and fill cooling module and heat recovery fluid systems.
- 1.5.2. Complete Cell Stack Assembly (CSA) dry out and ILS reduction.
- 1.5.3. Complete standard fuel cell Start Up Checklist.

## **1.6. Inspections and Utility Witness Testing**

- 1.6.1.1. Coordinate, provide and pay for trade contractor costs associated with inspections.
- 1.6.1.2. Coordinate, provide and pay for trade contractor charges associated with utility interconnection witness testing.

## **1.7. Miscellaneous**

- 1.7.1. Self Generation Incentive Program Management. Manage process for securing and receiving State Authority funding including all forms and milestone reporting.

## **1.8. Provide Documentation**

- 1.8.1. Final as-built drawings.
- 1.8.2. PureCell<sup>®</sup> Model 400 Installation Manual.
- 1.8.3. PureCell<sup>®</sup> Model 400 Owner's Manual.
- 1.8.4. PureCell<sup>®</sup> Model 400 Installation and Start-up Checklist.
- 1.8.5. PureCell<sup>®</sup> Model 400 Factory Test Report.

## **1.9. Exceptions and Assumptions**

- 1.9.1. Working Hours. All work shall be performed during core business hours (7 am to 5 pm), no overtime, weekends or holidays, except for the main electrical tie-in which will be performed during non-business hours to minimize disruption to normal building operations.
- 1.9.2. Customer-supplied water and gas analysis must meet the manufacturers' design requirements of the fuel cell.
- 1.9.3. Customer is responsible for maintaining the design conditions and performance of all existing building systems to which the fuel cell system interfaces.
- 1.9.4. No upgrades to site utilities are included in this Agreement such as, but not limited to, natural gas, electricity, water and sewer.
- 1.9.5. No fees for studies are included in this Agreement such as, but not limited to, fault current, advisory boards, air quality studies, and utility required studies.
- 1.9.6. No work related to unknown site conditions are included in this Agreement such as, but not limited to, soil remediation and underground objects.
- 1.9.7. No sound mitigation is provided under this Agreement.
- 1.9.8. No asbestos removal is provided under this Agreement.
- 1.9.9. Union labor is included.
- 1.9.10. No controls integration work with the existing Building (or Energy) Management is provided under this Agreement.
- 1.9.11. Main circuit breaker on switchboard MSB is 3000 amp Cutler-Hammer ND50k and is capable of back feeding power.
- 1.9.12. Southern California Edison meter is located in the MSB electrical yard at the main campus central plant.

## **2. Customer Responsibilities**

### **2.1. Site Design and Permits**

- 2.1.1. Facility Drawings and Specifications. Supply the following up-to-date drawings (in AutoCAD format) and specifications of the current facility:
  - 2.1.1.1. Provide plan view drawings that show existing facilities, equipment, and utilities.
  - 2.1.1.2. Provide electrical one-line drawings that show the main electrical service entrance, main distribution panels, and intended fuel cell interconnection point.
  - 2.1.1.3. Provide mechanical flow diagrams, layout drawings and specifications of any mechanical equipment interfacing with the fuel cell project.
  - 2.1.1.4. Utility Interconnect Application. Prepare documentation, file and pay for utility interconnect application and obtain utility interconnect approval.

### **2.2. Installation**

- 2.2.1. Installation Electrical and Gas Supply. Pay all charges for electricity and natural gas used during installation, and start-up.

## APPENDIX C

### **SCOPE OF SERVICE - SERVICE LEVEL: GOLD**

This Service Level includes Preventive Maintenance, as more specifically described below, as well as Unscheduled Maintenance, as more specifically described below.

#### **PREVENTIVE MAINTENANCE:**

- **REMOTE MONITORING**

UTC Power shall remotely monitor key performance parameters of each PureCell® System Model 400 fuel cell power plant ("Power Plant") covered by this Contract. Performance data will be recorded and made available in standard format to Customer upon Customer's written request or access to the data repository. The Customer will be advised within four (4) hours of events that UTC Power determines require service action after such events are recorded. UTC Power shall provide the Customer with all updates to the PureCell® System Model 400 Customer advisory information as issued.

- **PREVENTIVE MAINTENANCE ACTIVITIES**

UTC Power shall be responsible for performing "Preventive Maintenance" of the Power Plant. The current Preventive Maintenance activities are listed in the Preventive Maintenance Schedule attached hereto. All Preventive Maintenance performed under this Contract will be performed during regular working hours of regular working days for the technicians who perform the service. If the Customer requests overtime service, the Customer agrees to pay extra for the overtime-premium hours at UTC Power's overtime billing rates. There will be no charge for the straight time portion. Customer will reimburse UTC Power for any rigging, hoisting and related services and equipment necessary to perform Preventive Maintenance. The Customer acknowledges that, upon agreement as to a timely schedule, UTC Power will be permitted to shutdown the Power Plant(s) in connection with Preventive Maintenance performed under this Contract.

- **OFF-SITE TECHNICAL SUPPORT**

UTC Power shall provide the Customer with off-site technical support associated with Power Plant operation, including troubleshooting of operational issues, providing technical information related to the operation of the Power Plant, and performing remote diagnostics. UTC Power's customer support personnel shall be available by telephone at all times and shall address email requests received from the Customer during UTC Power's regular business hours.

#### **UNSCHEDULED MAINTENANCE:**

- "Unscheduled Maintenance" includes provision of the parts and labor required to return the Power Plant to operation in the event of an unscheduled shutdown. This Contract covers Unscheduled Maintenance, subject to the terms and conditions herein. Customer will be responsible for a portion of the cost of parts and labor associated with Unscheduled Maintenance pursuant to the table set forth in Appendix D.
- Unscheduled Maintenance specifically **excludes** repair or replacement of any equipment (and the associated labor) other than the parts of the Power Plant and the Cooling Module as set forth herein.
- UNSCHEDULED MAINTENANCE UNDER THIS CONTRACT INCLUDES REPLACEMENT OF THE CELL STACK ASSEMBLY AND THE FUEL PROCESSING SYSTEM, WHICH INCLUDES THE REFORMER AND THE INTEGRATED LOW TEMPERATURE SHIFT CONVERTER. IN THE EVENT ANY SUCH REPLACEMENT IS REQUIRED DURING THE TERM, EACH PARTY SHALL BE RESPONSIBLE FOR ITS RESPECTIVE PORTION OF THE COST PURSUANT TO THE TABLE SET FORTH IN APPENDIX D.

**Table 1. Preventive Maintenance Schedule**

| <b>Maintenance Procedures Description</b>                     | <b>Frequency</b>                 |
|---|----------------------------------|
| Filter Cleaning/Replacement                                   | Annual                           |
| Resin Replacement   | Annual (Upon Conductivity Alarm) |
| Flow Orifice Inspection                                       | Annual                           |
| Pump Gasket Inspections                                       | Annual                           |
| Wiring Visual Inspection                                      | Annual                           |
| Water Quality Evaluation                                      | Annual                           |
| Verify Proper Operation of Control Valves                     | Annual                           |
| Pressure Relief Valve Visual Inspection                       | Annual                           |
| Clean Flame Sensor  | Annual                           |
| Perform Gas Analysis  | Annual                           |
| Clean and Inspect Igniter                                     | Annual                           |
| Powerplant Tuning   | Annual                           |
| Heat Exchanger Cleaning and Inspection                        | Annual                           |
| Ancillary Coolant System Fluid Evaluation                     | Annual                           |
| Obtain Substack Voltages                                      | Annual                           |
| General Cleaning and Inspection of ESM for Dust and Corrosion | Annual                           |
| Duct Inspections  | Annual                           |
| Freeze Protection System Inspection                           | Annual                           |
| Ground Fault Circuit Interrupter Outlet Testing               | Annual                           |
| Sensor Calibration  | Annual                           |
| Uninterruptible Power Supply Battery Replacement              | Annual                           |
| Flow Orifice Replacement                                      | 3 Years                          |
| PCS Check Terminal Tightness                                  | 3 Years                          |
| Pump Replacements   | 5 Years                          |
| Pressure Relief Valve Replacement                             | 5 Years                          |
| Controller Battery Replacement                                | 5 Years                          |
| Variable Speed Drive Cooling Fan Replacement                  | 5 Years                          |
| Drive Removal   | As Needed                        |

\*Please refer to the Owner's Manual (FCMAN72447) for the latest Preventive maintenance table.

**APPENDIX D**

**COST OF UNSCHEDULED MAINTENANCE**

The cost of Unscheduled Maintenance is defined within the table set forth below, and shall be subject to additions and deductions authorized pursuant to the Contract. Customer shall be responsible for paying the Annual Payment amount set forth in the Contract, plus the Customer's share of the cost of any Unscheduled Maintenance, pursuant to the table below; provided, however, that during the first five (5) years of the Term, the Customer shall not be responsible for making additional payments for Unscheduled Maintenance.

| <b>Year</b> | <b>Percentage of Coverage Included in the Annual Payment Amount (UTC Power share of component replacement cost)</b> | <b>Additional Payment Amount based on Percentage of Coverage (Customer share of component replacement cost)</b> |
|-------------|---|---|
| 1           | 100%  | \$0   |
| 2           | 100%  | \$0   |
| 3           | 100%  | \$0   |
| 4           | 100%  | \$0   |
| 5           | 100%  | \$0   |
| 6           | 70%   | 30% of cost of required component replacement-parts and labor   |
| 7           | 65%   | 35% of cost of required component replacement-parts and labor   |
| 8           | 60%   | 40% of cost of required component replacement-parts and labor   |
| 9           | 55%   | 45% of cost of required component replacement-parts and labor   |
| 10          | 50%   | 50% of cost of required component replacement-parts and labor   |

After the end of year five, Customer's share shall be pro-rated, based on the month of the year during which the replacement is required. For example: if replacement is required after five (5) years and six (6) months, Customer's share would be 15%; if replacement is required after eight (8) years and three (3) months, Customer's share would be 61.25%.

**APPENDIX E**

**PURECELL<sup>®</sup> SYSTEM MODEL 400 SPECIFICATION**

|   |                         |
|---|-------------------------|
| Electrical Power Output:  | 400 kW, 480VAC, 60 Hz   |
| Recoverable Thermal (maximum@400kW electrical output at beginning of life): | Up to 1.734 MMBTU / hr* |

\*Values will change over the life of the product, See, "UTC Power PureCell System Model 400 Application and Data Guide" for details.



## Agenda Item (VIII-E-1)

|                    |   |
|--------------------|---|
| Meeting            | 10/16/2012 - Regular  |
| Agenda Item        | Committee - Facilities (VIII-E-1)   |
| Subject            | Change Order 1 for Alumni Carriage House Restoration with LSC Construction  |
| College/District   | District  |
| Funding            | District Allocated Measure C Funds  |
| Recommended Action | It is recommended the Board of Trustees approve: (1) project Change Order 1 with LSC Construction in the amount totaling \$13,513; and (2) the change order in excess of ten percent by a total of \$5,263. |

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### Background Narrative:

On March 20, 2012, the Board of Trustees ratified a contract with LSC Construction for the Alumni Carriage House Restoration project. Project construction progressed, but due to various unforeseen circumstances Change Order 1 is required.

Staff now requests approval of Change Order 1 with LSC Construction in the amount of \$13,513 for the Alumni Carriage House Restoration project. LSC Construction contract would now total \$96,013, exceeding the allowable ten percent contingency by a total of \$5,263. A Change Order Summary is attached for the Board's review and consideration.

Requested changes are within the original project budget approved by the Board of Trustees, and will be paid from project contingency funds.

Prepared By: Orin Williams, Associate Vice Chancellor, Facilities Planning & Development  
Dale Adams, Project Manager

### Attachments:

[20121016\\_Change Order 1\\_LSC Construction](#)

Riverside Community College District  
 Facilities Planning, Design and Construction  
 Alumni Carriage House Restoration

CHANGE ORDER SUMMARY

Change Order: 1  
 Contractor: LSC Construction

|   |    |           |
|---|----|-----------|
| <i>Contract Amount:</i>                               | \$ | 82,500.00 |
| <i>Change Order 1 Amount</i>                          | \$ | 13,513.00 |
| <i>Revised Contract Sum:</i>                          | \$ | 96,013.00 |
| <br>  |    |           |
| <i>Original Change Order Allocation:</i>              | \$ | 8,250.00  |
| <i>Change Order Amount Above Original Allocation:</i> | \$ | 5,263.00  |

Change Order 1 Description:

|  |            |
|--|------------|
| Lead and asbestos abatement.<br><i>Requested by: District</i><br><i>Accountability: Unforeseen</i>   | \$2,682.00 |
| Remove and replace top plate and floor joist patch due to termite damage.<br><i>Requested by: District</i><br><i>Accountability: Unforeseen</i>  | \$1,238.00 |
| Replace 4x4 posts and +/- 12' wall between post and jamb with new studs. Patch to match existing as required. Replace walls between (E) post and (E) exterior swinging doors at storage room 101 and 104. Replace (E) posts as well. All do to termite damage.<br><i>Requested by: District</i><br><i>Accountability: Unforeseen</i> | \$2,279.00 |
| Water leak investigation. Water under the foundation and driveway, saturated the ground.<br><i>Requested by: District</i><br><i>Accountability: Unforeseen</i>   | \$2,857.00 |
| Water valve relocation.<br><i>Requested by: District</i><br><i>Accountability: To correct maintenance leak</i>   | \$264.00   |
| Replace all existing window headers, 4 in all header supports.<br><i>Requested by: District</i><br><i>Accountability: Architect</i>  | \$1,313.00 |
| Add a guard rail at the landing to the ramp.<br><i>Requested by: City of Riverside Inspector</i><br><i>Accountability: Errors and Omission</i>   | \$2,110.00 |
| Add a 6 inch concrete curb to the ADA ramp exit.<br><i>Requested by: City of Riverside Inspector</i><br><i>Accountability: Errors and Omission</i>   | \$770.00   |



## Agenda Item (VIII-E-2)

|                    |  |
|--------------------|--|
| Meeting            | 10/16/2012 - Regular   |
| Agenda Item        | Committee - Facilities (VIII-E-2)  |
| Subject            | Amendment 6 for Norco Operations Center with Hill Partnership, Inc.  |
| College/District   | Norco  |
| Funding            | College Allocated Measure C Funds  |
| Recommended Action | It is recommended that the Board of Trustees approve Amendment 6 with Hill Partnership, Inc. in the amount of \$3,470 for additional architectural and engineering services. |

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### Background Narrative:

Staff requests approval of Amendment 6 with Hill Partnership, Inc. (HPI) in an amount not to exceed \$3,470 for additional architectural and structural engineering services to revise the structure for the rooftop screen at the mechanical equipment, coordination of engineering disciplines, and process a Field Change Directive to the Division of the State Architect. Amendment 6 is attached for the Board's review and consideration. The HPI agreement, including the amendments and reimbursable expenses, totals \$1,007,171.50.

The requested amendment is within the original project budget approved by the Board of Trustees, and will be paid from project contingency.

Prepared By: Paul Parnell, President, Norco College  
David Bobbitt, Interim Vice President, Business Services (MVC/NC)  
Laurens Thurman, District Consultant  
Orin Williams, Associate Vice Chancellor, Facilities Planning & Development

### Attachments:

[20121016\\_Amendment 6\\_HPI](#)

SIXTH (6) AMENDMENT TO AGREEMENT  
BETWEEN  
RIVERSIDE COMMUNITY COLLEGE DISTRICT  
AND  
HILL PARTNERSHIP, INC.  
*(Operations Center Project – Norco College)*

This document amends the original agreement and amendments between the Riverside Community College District and Hill Partnership, Inc., which was originally approved by the Board of Trustees on May 19, 2009.

The agreement is hereby amended as follows:

- I. Additional compensation of this amended agreement shall not exceed \$3,470, including reimbursable expenses. Hill Partnership, Inc.'s agreement, including amendments and reimbursable expenses, now totals \$1,007,171.50. The term of this agreement shall be from the original agreement date of May 20, 2009, to the extended estimated completion date of December 31, 2013. Payments and final payment shall coincide with the original agreement.
- II. The additional scope of work is described in Exhibit I, attached.

All other terms and conditions of the original agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed Amendment as of the date written below.

HILL PARTNERSHIP, INC.

RIVERSIDE COMMUNITY COLLEGE  
DISTRICT

By: \_\_\_\_\_  
Lawrence A. Frapwell  
President  
115 Twenty-Second St.  
Newport Beach, CA 92663

By: \_\_\_\_\_  
James L. Buysse  
Vice Chancellor  
Administration and Finance

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## Exhibit I

Project: Norco Operations Center

### **SERVICES**

Provide architectural and structural engineering design services for the following additional scope of work at a fixed fee total amount of \$3,470.

### **Additional Scope of Work:**

- Structural modification required to resolve numerous undocumented existing conduit banks crossing through the middle of the building (RFI#20) footprint;
- Elimination of the structure for the rooftop screen wall at the mechanical equipment;
- Coordination of engineering disciplines;
- Process a Field Change Directive to Division of the State Architect.