

## PROJECT STATUS REPORT

<b>Project Number:</b> S-LMAQM-08-GR-136	<b>Task Force:</b> REDG
<b>Title of Project:</b> Accelerate Distributed Generation-Combined Heat & Power Application in China	
<b>Lead Partner Country:</b> USA	
<b>Participating Partner Countries and Organizations:</b> US (EXERGY, ICF, Solar Turbines); China (WADE China, Broad Air Conditioning)	
<b>Project Location</b> (Country, State/Province, City): US/China	
<b>Project Manager Information</b>	
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<b>Project Start Date:</b> 9/23/08	<b>Date of Project Status Update:</b> 9/30/10

### Introduction

This project is comprised of 8 major tasks all designed to advance CHP and distributed power throughout China at the national and provincial levels. These tasks include various analytical, data collection and outreach activities. Each task has a number of sub-tasks, many of which are inter-related and dependent upon completion of other tasks. Every effort is being made to coordinate all tasks in a timely and efficient manner. Following is a rough estimate of target completion dates for each task:

Task Number	Task Name	Target Completion
1	Detailed Understanding of CHP Potential	September 30, 2010 (final report pending)
2	Define DG/CHP benefits, costs, opportunities and threats for target provinces	September 30, 2010 (final report pending)
3	Quantitative Provincial DG/CHP modeling and analysis	February 28, 2010
4	Identify National Policies and Actions	March 31, 2010
5	Develop Provincial Action Plans	March 31, 2010
6	Best Practices Handbook	September 30, 2010 (final report pending)
7	Provincial Workshops	June 4, 2010
8	U.S. Site Visits	June 24, 2010

### Task 1: Detailed Understanding of CHP Potential

The objective of this task is to collect data with respect to the availability of principal fuel supplies for industrial CHP systems, by province, within China. The viable fuels under consideration are: natural gas, opportunity fuels (coke oven gas, coal bed methane), waste heat, and biomass. This data will serve to rank the Chinese provinces on the availability of fuels. A second data set will be collected with respect to the availability of existing and near-term new opportunities to apply site-based CHP systems within the top 6 to 8 provinces within industrial, commercial and institutional applications. This data will be used to determine the top five Chinese provinces/municipal districts in terms of energy profile and CHP technical potential. The deliverable from Task 1 will be a report that contains the data collected at the provincial/municipal district level and the screening analysis of the top five provinces/municipal districts based on fuel availability, CHP opportunity review and national priorities. This deliverable contributes to Task 2 and the provincial report deliverables in Task 3.

### **Task 1 Accomplishments**

Received Chinese partner comments to report and had them translated and incorporated.

### **Task 1 Work Remaining**

Final approval of report.

### **Task 2: Define DG/CHP benefits, costs, opportunities and threats for target provinces**

The objective of this task is to collect data with respect to understanding the keys to the provincial regulatory and infrastructure framework for CHP. The analysis will include an in-depth analysis of the barriers preventing CHP projects (such as interconnection rules, electric rate tariffs, lack of skilled service providers), the benefits CHP currently offers to the site, province, grid, and environment, and identification of key stakeholders within industry, suppliers, and government. The deliverable from Task 2 will include a provincial strengths, weaknesses, opportunity and threats report. This report will also contribute to portions of the provincial report deliverables in Task 3.

### **Task 2 Accomplishments**

Received Chinese partner comments to report and had them translated and incorporated.

### **Task 2 Work Remaining**

Final approval of report.

### **Task 3: Quantitative Provincial DG/CHP modeling and analysis**

Concurrently with Tasks 1 and 2, the current WADE Model will be reviewed. A new demand side model is being developed to accept the output data from Tasks 1 and 2 to estimate the CHP technical potential based on assessed available load. The WADE Model is also being modified to automatically accept the output from the supply-side model. The combined demand-side / supply-side model will be run for the five top provinces. The results will be assessed and final provincial reports will be developed incorporating the results of all three tasks.

### **Task 3 Accomplishments**

None.

### **Task 3 Work Remaining**

None.

### **Tasks 4: Identify National Policies and Actions**

Working with government and private sector interests, a thorough understanding of current national policies and incentives for CHP and clean distributed generation will be developed. Working with these stakeholders, key barriers will be identified. Strategies and recommendations to overcome these barriers will also be developed, leading to acceleration of the deployment of CHP and clean distributed generation.

### **Task 4 Accomplishments**

Research and outreach was performed.

### **Task 4 Work Remaining**

None. (Further work and opportunities would be prudent, but would require additional attention and funding)

### **Task 5: Develop Provincial Action Plans**

High level champions of CHP and clean distributed energy will be developed to promote a favourable policy environment. Areas of concern include: interconnection standards and processes; energy reduction targets for high primary energy intensive industries; incentives targeting primary energy efficiency; and potential penalties for not reaching specific reduction targets. This will require a series of meetings with key stakeholders in each target province.

### **Task 5 Accomplishments**

Discussed future cooperation opportunities with provincial contacts and identified some initial candidates for future cooperation as potential project participants/partners.

### **Task 5 Work Remaining**

None. (Further work and opportunities would be prudent, but would require additional attention and funding)

### **Task 6: Best Practices Handbook**

A Handbook on best practices for the successful deployment of CHP and distributed generation in China will be developed.

#### **Task 6 Accomplishments**

Draft outline of handbook was prepared and submitted for review.

#### **Task 6 Work Remaining**

Final Handbook will be prepared and submitted.

#### **Task 7: Provincial Workshops**

Five provincial workshops will be held to present the findings from the research described above, disseminate the Handbook and continue to build support for greater deployment of CHP and distributed generation.

#### **Task 7 Accomplishments**

Incorporation of results from workshops into final reports was done.

#### **Task 7 Work Remaining**

None

#### **Task 8: U.S. Site Visits**

A visit of Chinese officials to the U.S. to see on-site CHP systems and visit with U.S. experts will be arranged.

#### **Task 8 Accomplishments**

None.

#### **Task 8 Work Remaining**

None.