Natural Gas and Power Generation

The Solution Is At Hand

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Safe Harbor Statement

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Reconciliation to GAAP Financial Information
The following presentation includes certain “non-GAAP financial measures” as defined in Regulation G under the Securities Exchange Act of 1934. Schedules are included herein that reconcile the non-GAAP financial measures included in the following presentation to the most directly comparable financial measures calculated and presented in accordance with GAAP.
National Portfolio of nearly 29,000 MW

Note: Projects Under Advanced Development include Russell City Energy Center and upgrade at existing Los Esteros Critical Energy Facility.

1 Based on estimated generation for 2009.
Calpine’s focus on clean technologies makes it a unique independent power producer

Calpine is the nation’s largest baseload renewable, natural gas and cogeneration power provider

Modern

Scale

Efficient

Exclusively Gas and Geothermal

Source: SNL Financial.


Source: 2009 SEC filings.

Our steam-adjusted heat rate is 7,263


Increased use of natural gas generation could catapult the US to a cleaner future starting today

Calpine’s emissions statistics illustrate the potential for natural gas generation to lower the power sector’s environmental footprint.

**CO₂**: Less than Half our Peers’ Emissions per MWh

**NOx**: A Fraction of our Peers

**Virtually Zero SO₂**

**Virtually Zero Mercury Emissions**

Increased utilization of existing gas-fired capacity could single-handedly reduce power sector CO2 emissions by 20%

- Since gas combined cycles emit less than half the CO2 of coal plants per MWh, switching to gas could significantly reduce power sector emissions, even without incremental capital investment.

### Environmental Advantages of Gas Generation

Reflects EIA estimates of gas combined cycle capacity (~190GW), average utilization (<40%), and power sector emissions (EIA Annual Energy Outlook, April 2009). The estimate of potential CO2 reduction reflects the impact of increasing the utilization of existing gas plants (to 85%, displacing higher emitting generation).
**Gas-Fired Generation: A Solution for Tomorrow, Today**

<table>
<thead>
<tr>
<th></th>
<th>Otay Mesa Energy Center</th>
<th>Nuclear Plant</th>
<th>Wind Farm</th>
<th>Solar Field (CSP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost ($/KW)</strong></td>
<td>-$950</td>
<td>$3,000 - $4,500</td>
<td>$1,900 - $2,200</td>
<td>$4,500 - $6,000</td>
</tr>
<tr>
<td><strong>Construction Period</strong></td>
<td>29 mos.</td>
<td>60 - 84 mos.</td>
<td>12 - 18 mos.</td>
<td>12 - 24 mos.</td>
</tr>
<tr>
<td><strong>Land Usage</strong></td>
<td>1/20th acre / MW</td>
<td>Up to 2 acres / MW</td>
<td>Up to 83 acres / MW</td>
<td>Up to 10 acres / MW</td>
</tr>
<tr>
<td><strong>Water usage</strong></td>
<td>~15 gal / MWh</td>
<td>Up to 750 gal / MWh</td>
<td>Negligible</td>
<td>Up to 800 gal / MWh</td>
</tr>
<tr>
<td><strong>Subsidies Required</strong></td>
<td>None</td>
<td>Largest</td>
<td>Large</td>
<td>Larger</td>
</tr>
</tbody>
</table>

Sources: EIA, E3, AWEA, DOE, CEC, Calpine, Public data.

1 Does not include permitting period.
2 Otay Mesa features air cooled system. Nuclear usage assumes recirculating cooling system.
3 Assuming natural gas price of $6 - $8/mmbtu.

*In a world of scarce natural and financial resources, gas-fired generation offers a path to a cleaner footprint with lower capital requirements.*
Wholesale power prices have returned toward 10-year lows, due in large part to abundant shale gas supplies.

Wholesale On Peak Electricity Prices and Residential Rates

High prices from 2005 to mid-2008 reflected lower expectations of domestic natural gas supplies.

The proliferation of advanced shale drilling techniques increased domestic gas supplies, leading to a sharp drop in spot and forward natural gas prices.

Source: Calpine, Platts, and EIA data. Prices reflect wholesale rolling 12-month forward average on peak prices for PJM-East, Texas (ERCOT-Houston), and California (NP-15). Residential rates reflect annual average retail price of electricity to end-users.