



Draft 2012 Integrated Energy Policy Report Update

November 7, 2012



Background

- CEC prepares IEPR every two years and update in intervening years
- *2012 IEPR Update* – covers activities begun in *2011 IEPR* and completed or continued in 2012
- Main focus of report – Renewable Action Plan
- Other items:
 - Electricity and natural gas demand forecast
 - Natural gas outlook and market trends reports
 - Assessments of CHP potential and barriers
 - Assessment of electricity infrastructure needs in Southern California



Electricity/Natural Gas Demand Forecast

- Average annual demand growth 2010-2022:
 - Electricity: 1.03% to 1.69%
 - Natural gas: 0.58% to 0.81%.
- Uncommitted efficiency savings not reflected in forecast; preliminary estimates provided to CPUC in July 2012
- Updated assessment of uncommitted impacts in summer 2013 based on updated CPUC Goals Study



Electricity/Natural Gas Demand Forecast

- *Recommendations*
 - Expand analysis of effects of climate change
 - Disaggregate forecast beyond usual planning area level
 - Improve reflection of uncertainty in forecast due to zero emission vehicles, combined heat and power, and distributed generation



Natural Gas Market Outlook and Trends

- Hydraulic fracturing
 - Potential impacts of environmental concerns on price/supply
 - CEC monitoring activities at state and federal levels
- Demand increases
 - Nationwide seeing shift from coal to natural gas
 - California seeing increased demand from NG plants for renewable integration and NG as transportation fuel



Natural Gas Market Outlook and Trends

- Electric and natural gas market harmonization
 - Coordinate scheduling of pipeline deliveries with electricity dispatch decisions.
- Pipeline safety and reliability
 - Potential price increases from San Bruno event
 - Potential decreases from added pipeline capacity and increased competition



Natural Gas Market Outlook and Trends

- *Recommendation*
 - CEC and CPUC should monitor and participate in FERC proceedings related to:
 - ✓ Natural gas supply and pipeline development
 - ✓ Electric/natural gas harmonization



Combined Heat and Power

- Assessment of technical/market potential
 - 8,500 MW of existing CHP
 - 14,000 MW of additional potential
- CHP barriers
 - Cap and trade rules
 - Interconnection
 - Nonbypassable, departing load, standby, and demand charges
 - Metering costs
 - Eligibility rules for net energy metering



Combined Heat and Power

- *Recommendations*
 - CEC to revisit and update CHP technical assessments in 2013/2014
 - Facilitate interconnection process for facilities that expand generation capability
 - CEC/CPUC evaluate progress of QF Settlement Agreement, AB 1613, and other CHP programs and report to Governor and Legislature.



Electricity Infrastructure Assessment

- Issues affecting Southern California infrastructure needs
 - OTC policy
 - Lack of emission offsets
 - Efficiency and demand response uncertainty
 - Renewable integration needs
 - Multiple agencies involved
 - SONGS outage
 - Climate change impacts
 - Electrification in the Los Angeles Basin



Electricity Infrastructure Assessment

- Multiple studies underway for Southern California
- Uncertainties affecting assessment of statewide needs
 - Demand forecast changes
 - Timing of OTC and other retirements
 - Projects in the pipeline
 - Mix and location of RPS projects
 - DG/CHP
 - Climate change effects
 - Cap and trade



Electricity Infrastructure Assessment

- *Recommendations*
 - CEC will participate in reliability assessments for summer 2013/2014 and SONGS investigation
 - CEC will conduct public workshop during 2013 IEPR to review CAISO nuclear facility replacement study
 - 2013 IEPR will track progress of AB 1318 studies
 - CAISO should provide refreshed assessments of OTC compliance schedules
 - CPUC should consider rulemaking for a forward procurement mechanism for flexible capacity



Renewable Action Plan

- *Renewable Status and Issues Report* developed during 2011 IEPR identified renewable challenges and suggested strategies
 - Identifying and prioritizing geographic areas for renewable development
 - Evaluating costs and benefits of renewable projects
 - Minimizing interconnection costs and time at the transmission and distribution levels
 - Promoting incentives for projects that create in-state jobs and economic benefits
 - Promoting and coordinating existing financing and incentive programs for critical stages in the renewable development continuum



Renewable Action Plan Principles

- Promote renewable-centric portfolio that maximizes benefits and minimizes cost/risk
- Position California for higher renewable targets
- Fill gaps left by market
- Recognize connections between actions
- Broaden electricity planning
- Promote clean energy investments
- Address cost issues



Strategy 1: Identify and prioritize geographic areas in the state for both renewable utility-scale and distributed generation development.

- ***Recommendations***

- Identify renewable energy development zones
- Incorporate distributed renewable energy development zones into local planning processes
- Conduct 2030 analysis
- Continue development of renewable energy on government property



Strategy 2: *Evaluate cost of renewable energy projects beyond technology costs – including costs associated with integration, permitting, and interconnection – and their impact on retail electricity rates.*

- **Recommendations**

- Modify procurement practices to develop a higher value portfolio
- Strengthen links between transportation and clean electrification
- Revise residential electricity rate structure
- Improve transparency of renewable generation costs



Strategy 3: *Minimize interconnection and integration costs and requirements at both the distribution and the transmission levels.*

- *Transmission Interconnection Recommendations*

- Consider environmental and land-use factors in renewable scenarios
- Monitor status of California ISO approved transmission projects to ensure timely completion
- Streamline transmission permitting



Strategy 3 (cont'd)

- ***Distribution Interconnection Recommendations***
 - Develop dialogue on distribution planning and opportunities for a more integrated distribution planning process
 - Enable deployment of advanced inverter functions
 - Disaggregate CEC demand forecast
 - Create a statewide data clearinghouse for renewable energy generation planning



Strategy 3 (cont'd)

- ***Grid-Level Integration Recommendations***
 - Develop a forward procurement mechanism
 - Define clear tariffs, rules, and performance requirements for integration services
 - Provide regional solutions to renewable integration
 - Ensure adequate natural gas pipeline infrastructure



Strategy 4: *Promote incentives for renewable technologies and development projects that create in-state jobs and support in-state industries, including manufacturing and construction.*

- *Recommendations*
 - Better align workforce training to needs
 - Enhance linkage between clean energy policies, workforce, and employers
 - Support the Innovation Hub (iHub) Initiative at the Governor's Office of Business and Economic Development



Strategy 5: *Promote and coordinate existing state and federal financing and incentive programs for critical stages including RD&D, precommercialization, and deployment.*

- *Recommendations*

- *Advance R&D for existing and co-located renewable technologies; innovative renewable technologies; renewable integration, and siting of renewable projects*
- *Create interagency clean energy financing working group*
- *Support extension of federal tax credits*
- *Study the effectiveness and impacts of the property tax exclusion*
- *Modify the Clean Energy Business Financing Program*
- *Develop marketing outreach plan for Energy Conservation Assistance Account*



Next Steps

- Comments due COB December 3
- Instructions on submitting written comments under November 7 heading at:
www.energy.ca.gov/2012_energypolicy/documents/index.html
- Release of proposed final *2012 IEPR Update* anticipated January 30, 2013
- Proposed adoption February 13, 2013