

Direction of CT's Strategic Electric Energy Policy

Based on Initial Findings of CEAB Review of EDCs' 2010 IRP

Major Needs – Reliability, Environmental, Cost and Energy Security all need to be considered

- CT RPS requirements increase significantly - 20% of CT MWh by 2020.
- Meeting environmental standards will require contribution from the electric sector.
 - Significant improvement in NOx is needed in the near term
 - CT carbon policy in place for 2020/2050; possible new federal requirements
- Over 2000 MW fossil generation expected to retire in 5-20 year timeframe.
- Transmission improvements will be required for reliability and expansion of renewables over next 20 years.
- Increasingly important to analyze and consider energy security especially with growing reliance on LNG and gas pipelines and large transmission lines.

Key Drivers – Most placing upward pressure on costs and electric rates

- New gas finds may provide moderating price impacts in the near term; perhaps in the longer term.
- Current generating units will require significant investment to enable them to comply with environmental standards, in particular NOx emissions and water cooling issues.
- Renewable supplies will be increasingly costly, including transmission costs longer term
- Renewable resources do not offer significant capacity solutions, requiring fossil resources for reliability and system integration
- Price of carbon allowances may increase over time depending on federal action.

- Transmission will only become more expensive and difficult to site / Expected to increase 5 fold over 10 year period, rising from .5 cents/KWh in 2005 to expected 2.5 cents/KWh by 2015 in real terms.
- Retirement or replacement of generation will incur significant costs
- Generation supply options are capital intensive and it is very difficult to debt finance electric resource project without contracts.
- Demographics development patterns and the economy, especially over time, could affect demand.

Resource Options - **No silver bullet but opportunity to maximize options**

- **DSM** – DSM, as the least cost resource, alternative should be maximized for cost avoidance, to reduce capacity need, and provide significant environmental benefits. Statute directs that resource needs should first be met by “all available energy efficiency and demand-side resources that are cost-effective, reliable and feasible.”
- **Renewable** – Need to pursue regional approach while enabling all cost effective in-state renewables. As we move to meet increasing RPS requirements, higher cost off-shore wind and transmission costs must be factored in.
- **Repowering** – Need to make sure generation units are as clean, efficient and able to dispatch in synch with renewables as possible.
- **CHP** – Need to continue to study and take advantage of CHP opportunities.
- **Transmission** – Whether for reliability or renewables, transmission will be increasingly expensive.
- **Imports** – Whether from NY or Canada, need to continue to monitor and take advantage of new opportunities.
- **Nuclear** – In light of environmental requirements and changing technologies and federal policies, nuclear should be considered as a potential long-term supply option.

Procurement Challenges - **Status quo is not sufficient; need to take action now**

- Finding most effective and least cost way to obtain DSM – EDC programs; contracts; standards and how to fund.
- Financing for repowering, renewables and nuclear.
- How to best interact with the market to achieve optimal resource mix.
- Dependence on region for meeting RPS standard; how to ensure CT interests are met.
- CT must have the organizational, operational and administrative, financing and oversight structures and processes in place to implement the fully integrated plan.

DRAFT - PRELIMINARY