

Celtic Energy



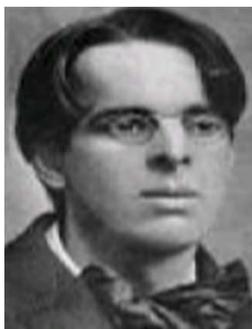
»»» **Presentation to DEEP
Using Energy Savings
Performance Contracting to
Leverage Comprehensive DSM**

September 19, 2011

energy
solutions
for a
sustainable
future

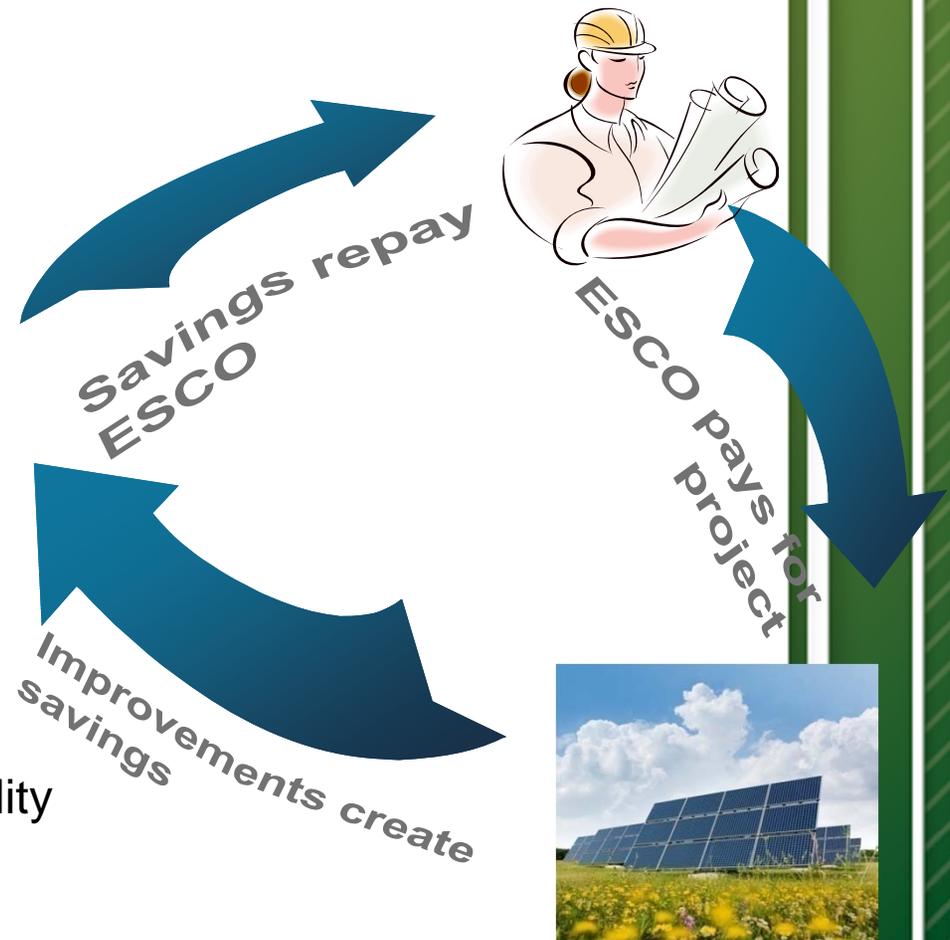
“Education is not the filling of a pail,
but the lighting of a torch”

William Butler Yeats



What is ESPC?

- Energy Savings Performance Contracting (ESPC) is an “*innovative*” method to purchase energy efficiency, RE, water, and O&M improvements in buildings
- A “*single*” procurement is used to purchase a complete package of services from an “Energy Services Company” (ESCO) on an **open book** basis (Design/Build done right)
- **Self-Financing** of the entire project so there are **no up front costs**. Use Tax Exempt Municipal Lease, **not ESCO \$**
- ESPC can help improve indoor air quality and health care environments, while reducing energy costs
- Fixed price - **No change orders**
- **Guaranteed utility savings** of 20-40%



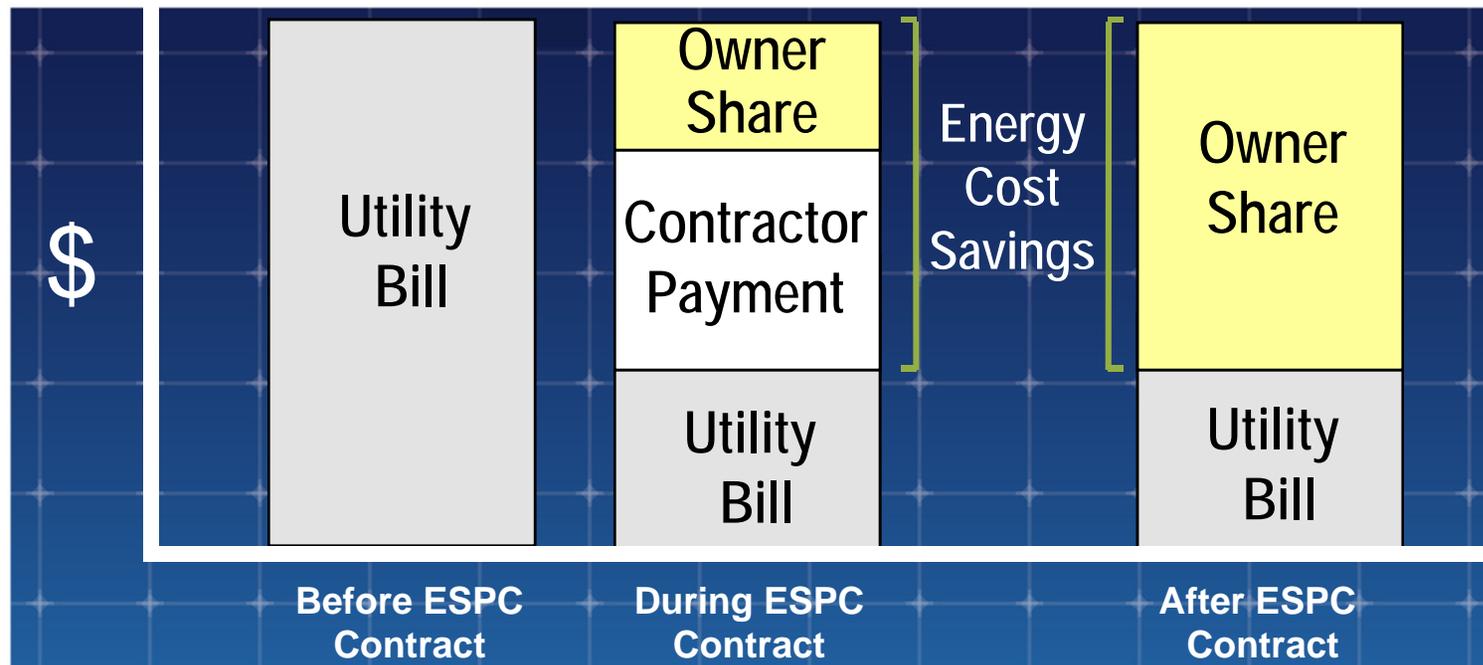
Interesting Facts about ESPC

- \$40B in projects since 1990
- \$50B savings – guaranteed and verified
- 330,000 person-years of direct employment
- \$25 billion of infrastructure improvements
- 420 million tons of CO2 savings at no additional cost



National Association of
Energy Service Companies

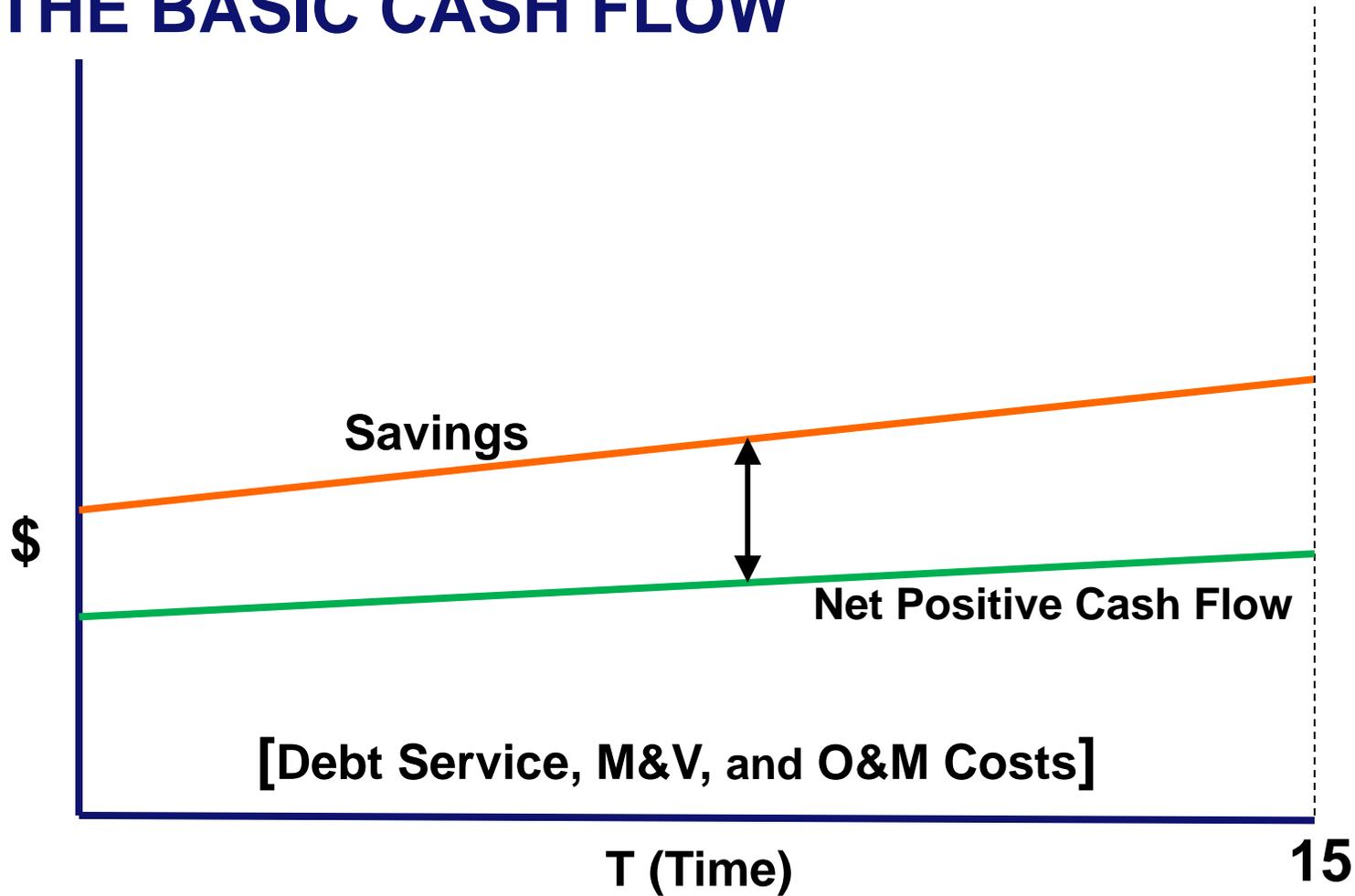
- CT ESPC potential is \$350 Million in construction (DOE) based on data of \$100 per capita from other States
- CEI believes more than \$700 million, due to high utility rates
- 4,000-8,000 job years
- 20% incentives = \$140M



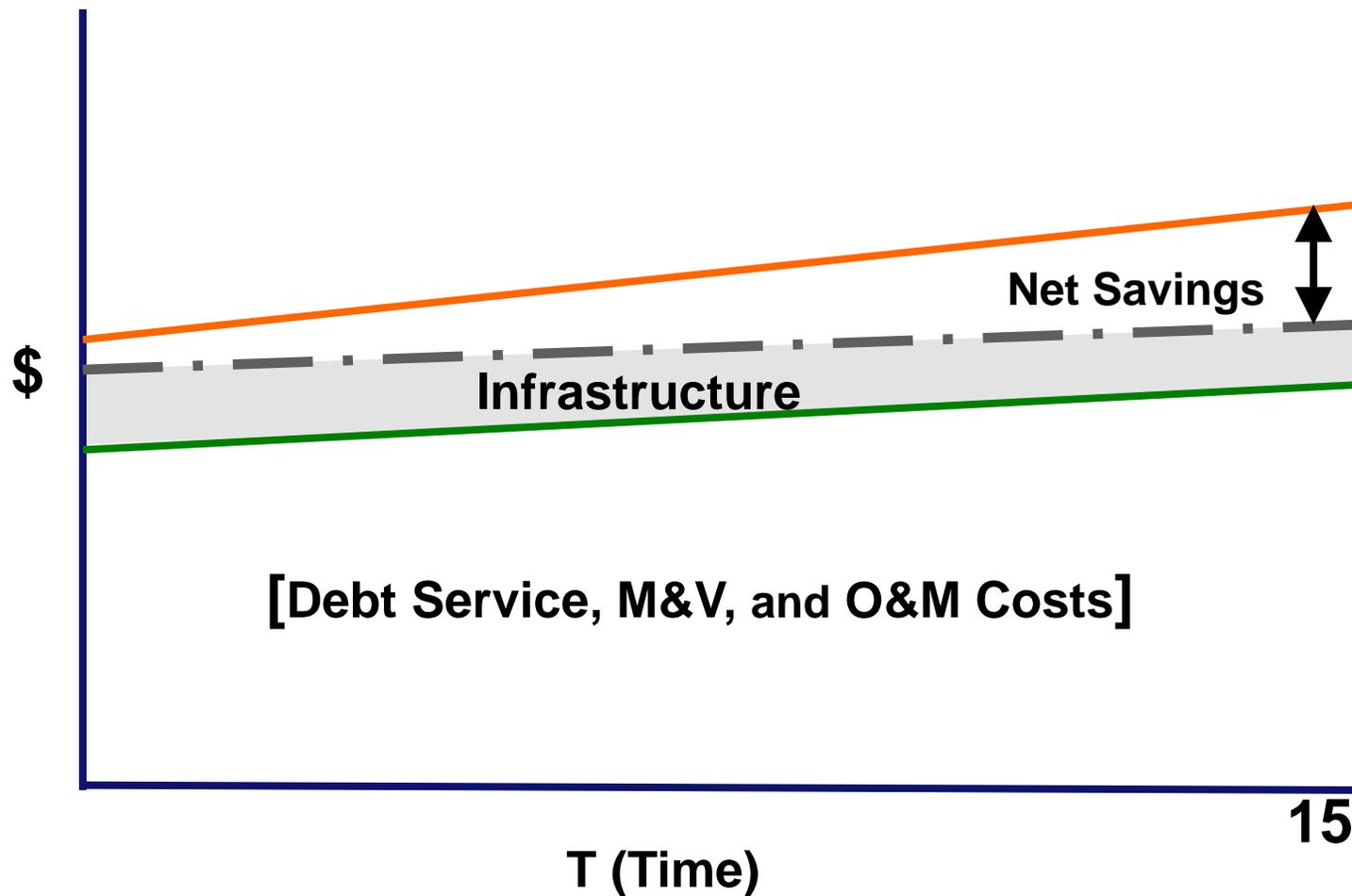
How Does It Work?

- Pay a lower utility bill
- Pay the contractor
- Achieve cost savings for the Owner

THE BASIC CASH FLOW



Cash Flow + Infrastructure Enhancements



ESPCs re-allocate current spending NOT ADDED DEBT!!!

Reduce spending on:

- Wasted energy
- Maintenance of old, inefficient equipment

And reallocate the same spending to:

- New energy-using infrastructure
- Project financing costs
(mostly interest)

Will not degrade credit rating

No need to ask for new capital \$



How can ESPC leverage DSM?

- Comprehensive fuel blind approach leads to deeper retrofits, higher incentives per project dollar spent
- Typically 20-40% energy cost savings
- ESPC's innovative financing mechanism makes EDC incentives an attractive "hub" to leverage private \$\$
- Robust measurement & verification (M&V) ensures achievement and persistence of savings
- Detailed Investment Grade Audit (IGA) and long term guarantee fits well with EEB's focus on performance and continuous improvement
- Savings guarantee eliminates "value engineering" that typically "strands" designer payments in ECB projects
- ***ESPC potential of \$500M-\$1B can make significant impact on returning CT to No. 1 in DSM nationally and create JOBS!!***

CEI recommendations for Maximizing ESPC's Contribution to Successful DSM Deployment

- Continue to support EDC participation in ESPC Working Group, promotion of ESPC program
- Provide seed money for revolving loan fund to State agencies and municipalities with initial Technical Assistance to commence projects
- Start an Energy Services Coalition chapter to help promote ESPC in State
- Create “Continuous Improvement” component to improve synergies with future IRPs
- Focus higher incentives on robust M&V, HVAC, central plants to secure deep savings and reduce peaks.

Windham Public Schools Willimantic, CT

- Cash strapped district with 9 older facilities.
- Major infrastructure upgrades; boilers, windows, etc.
- Solved chronic comfort and maintenance problems (No need for parkas in class anymore!)
- Many standard measures, lighting, sensors, EMS
- Small Cogeneration at two schools allowed for emergency shelter status
- **CEI managing Performance Contract, \$5.5 million at all schools, 13 year term**



EDC response to DPUC (PURA) Order 25

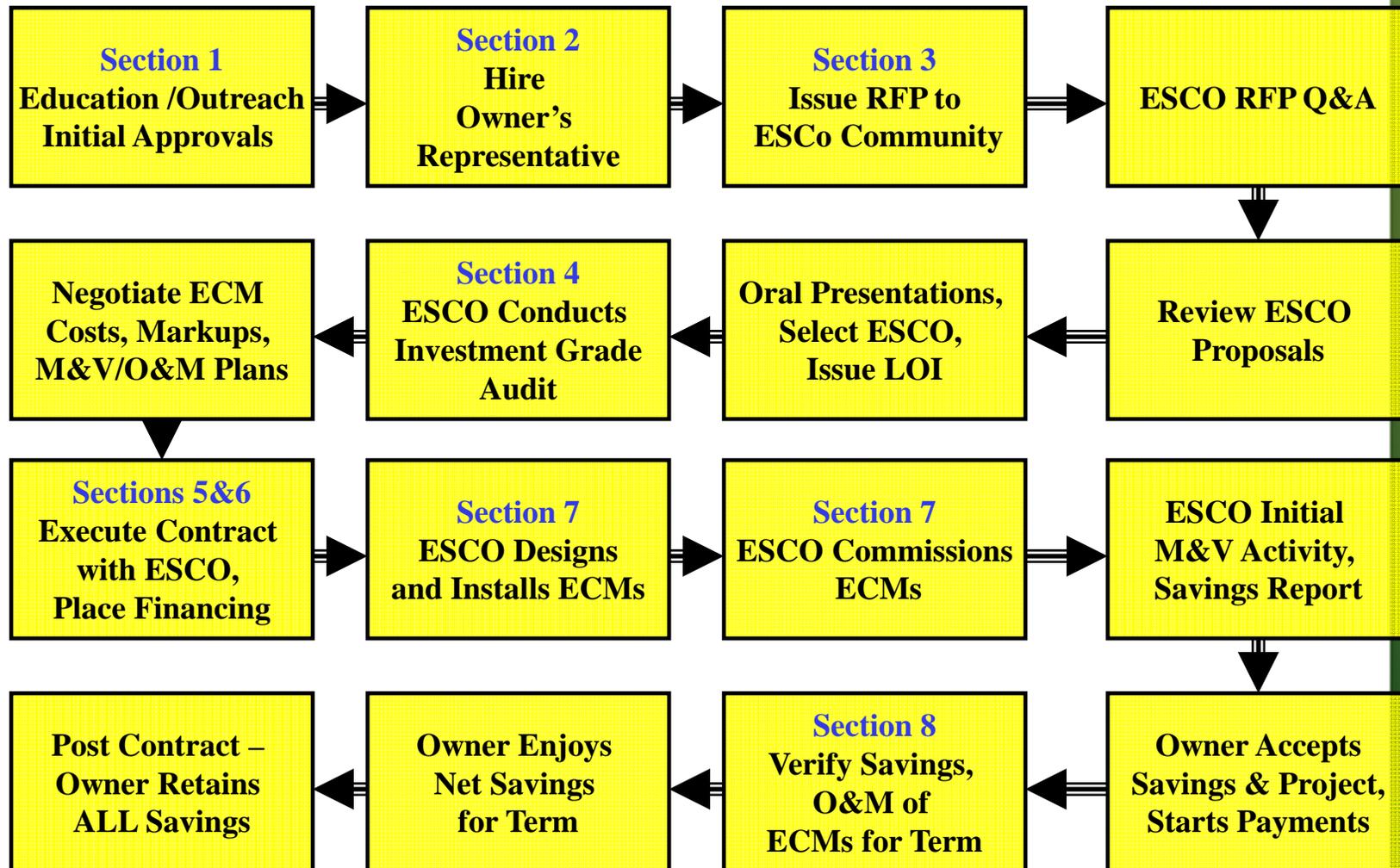
- Develop Best Practices Recommendations for ESPC in the Municipal, University, School, and Hospital (MUSH) market in the State.
- Inclusion of State buildings was initially considered, but because of the State's centralized management structure, it is recommended that the State use this document as a base framework and modify it to fit its own specific procedural and technical requirements.
- This effort has been facilitated by CL&P and UIC, who have organized an ESPC Best Practices Working Group to provide expert support for the project. The EDCs in turn hired Celtic Energy, Inc., a nationally known consultant with considerable expertise in the ESPC market, to assist in managing the technical content and deliverables of the Working Group. This report is a result of the efforts of that Working Group.

Stakeholders include:

- Energy End Users
- Investor Owned Utilities
- Regulatory Authorities
- Energy Services Providers
- Environmental Organizations
- Other Interested Parties

What's the ESPC Process? ESPC 101

9/23/2011



Highlights of ESPC Best Practices Guidelines

- Describe ESPC in layperson's terms
 - Lay out easy to follow process
 - FAQs in general and specific aspects
 - Recommend close cooperation with DEEP and EDCs
 - Include model documents for hiring consultants and ESCOs based on ESC and DOE
 - Sample agreements for IGA and ESA
- CT ESPC potential is \$350 Million in construction (DOE) based on data of \$100 per capita from other States
 - CEI believes more than \$700 million, due to high utility rates
 - 4,000-8,000 job years

Next Steps

- Adapt model documents for use by Connecticut State Agencies and the MUSH market. Specifically ensure that the resulting documents and processes are consistent with and supportive of the requirements of PA 11-80 with respect to performance contracting.
- Prepare recommendations to DEEP and EEB for follow-up actions, including:
 - How the model documents and processes can be best utilized by state, local, educational agencies, and other users.
 - Identify types of issues beyond the purview of the Work Group that users may need to address due to their specific circumstances.
 - Outline appropriate educational, outreach and support efforts to promote performance contracting.
- Receive comments from PURA, revise documents
- Submit Final ESPC Model Documents, Processes and Support Materials – by September 30

Presenter's Bio

Christopher F. Halpin, PE,CEM,LEED

- **26 years experience** in energy efficiency industry, including: engineering, management, marketing and sales at several energy firms
- Founded Celtic Energy in 2000 utilizing **“Industry Best Practices”** to help end users reduce costs
- Selected by **Energy Secretary Steven Chu** to be an official reviewer of ARRA and Smart Grid proposals
- Director Level at premiere ESCOs and Consulting Firms
- Former Global Energy Manager, NCR
- Nationwide Speaker and Trainer on Energy, LEED, Design/Build
- Registered PE in NY, CT, FL, RI, NV, AZ, IRL
- US EPA Energy Star Buildings Partner
- Instructor: Sustainable Building Advisor Cert. at Gateway Community College
- USDOE – ESPC Improvement Working Group



Thank you for your time...
QUESTIONS?

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