Policies and Possibilities for Energy Efficiency from Electric and Gas Utilities

David Pickles
ICF International
dpickles@icfi.com
(972) 841-2567

34th Annual PURC Conference
A Century of Utility Regulation: Looking Forward to the Next Hundred Years
Thursday, February 15, 2007

Overview

1. The Potential for DSM
2. Barriers to DSM
3. Complexities in DSM Planning

ICF Overview

- Founded in 1969
- Symbol: ICFI (NASDAQ)
- ~$240 million annual revenue
- Over 1,600 employees
- Fairfax, VA headquarters
  - 15 offices around the U.S.
    - Albany, NY
    - Baton Rouge, LA
    - Charleston, SC
    - Dallas, TX
    - Dayton, OH
    - Fairfax, VA
    - Houston, TX
    - Lexington, MA
    - Los Angeles, CA
    - Middletown, PA
    - Ogden, UT
    - Oklahoma City, OK
    - Orange County, CA
    - Research Triangle Park, NC
    - San Francisco, CA
  - 5 international offices
    - Brazil - Rio de Janeiro
    - Canada - Toronto
    - India - New Delhi
    - Russian Federation - Moscow
    - United Kingdom - London

Services


Defense


Homeland Security


Energy


Environment


Transportation


Social Programs

Service Areas

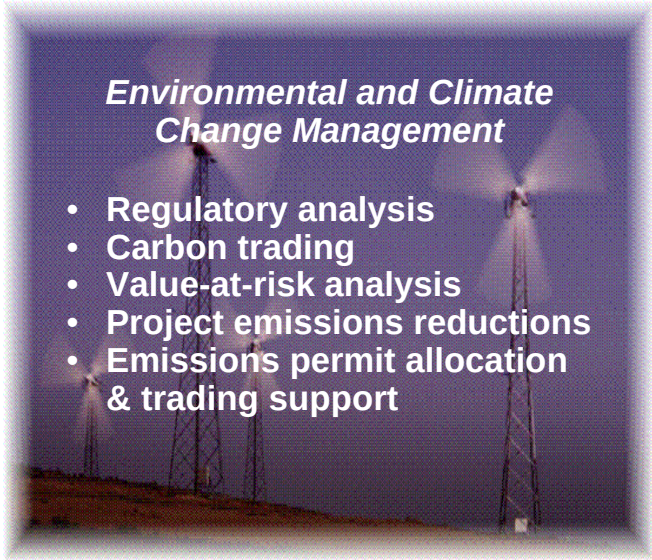
Strategy
Market and Policy Analysis
Research and Evaluation
Technology Assessment
Operations and Logistics Planning & Analysis
Program and Project Management
Information Technology
Human Capital Management
Strategic Communications

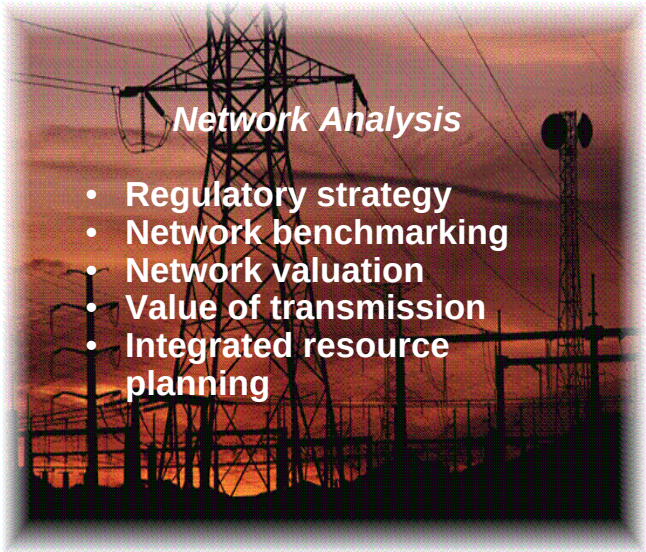
Clients

Government
Civilian / Defense
Homeland Security

Industry
Energy/Utilities
& Other

Services to the Energy Industry





The Potential for DSM – Some Typical Findings

- On average, 11% of demand can be saved with cost-effective DSM over 12 years. Estimates go as high 40%
- Can be inexpensive, as low as $400/kW for a portfolio of programs (compared to $450/kW for gas CT and $1,100 - $1,400/kW for coal)
- DSM *sometimes* provides significant additional economic development, emissions, and T&D benefits

Summary of Energy Efficiency Potential over 20 Years from a Range of Studies

	Technical Potential	Economic Potential	Market Potential (very aggressive assumptions)	Market Potential (moderate assumptions)
Residential Sector	21%–36%	10.6%–30%	11%–35%	5.3%–21.7%
Commercial Sector	18%–41%	12.7%–35%	9%–39%	5.1%–17%
Industrial Sector	17%–38%	6.2%–32%	7%–60%	2%–19%

Barriers to DSM

1. Disaggregated Value Chain
2. Credibility and Dispatch of DSM Load Impacts
3. Cost Recovery
   - Legislative authority
   - Method of recovery and rate impact
   - Allocation and class equity - Industrials
   - Incentives
   - Trust and consistency

Barriers to DSM (2)

4. Goal Setting Process and Performance
5. Restrictions on Program Cost Components
6. Inflexible, Expensive, and Time Consuming Processes
7. Earnings Growth and Equity Analyst Perceptions
8. Risks and Uncertainty

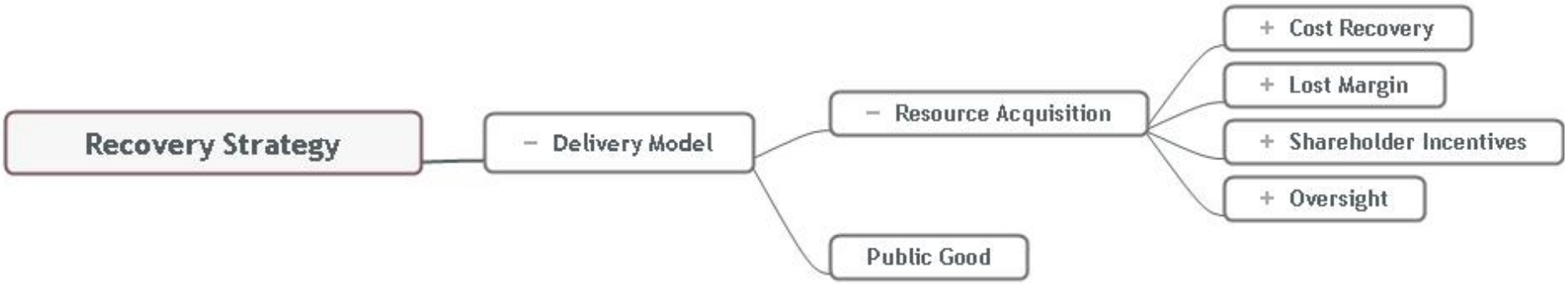
Complexities in DSM Planning

1. Generation Deferral impacts
   - Energy
   - Emissions
   - Prices
   - Reliability
   - Mothballing
2. Value T&D and Demand Response
3. Lack of system planning/IRP frameworks
4. Scope of the measures
5. Lack and age of data

Complexities in DSM Planning (2)

6. Planning horizon and immediate need
7. Load forecast uncertainty
8. CO2 and Fuel Prices
9. Customer response, incentive strategies, and free riders
10. Beneficial electrification
11. Skills
12. Collaborative processes

Cost Recovery Models



Cost Recovery Considerations