

# Overview of Overseas DG Activities and Experiences

# US - National Energy Policy

- Strategic Plan for DG to 2020
  - 20% new capacity from DG by 2010
  - Develop technologies and evaluate regulatory barriers to 2005
  - Links to Comprehensive National Energy Strategy
- National uniform interconnection standards
  - Only 33 States allow sale from on-site generation
- Rules on pricing of transmission
- Natural gas policy

# US - State Regulators

- California Energy Commission strategic program
- Recent Arthur D Little report
  - Interconnection
  - Grid impacts
  - Market integration
- Economic feasibility has yet to be demonstrated
- Infrastructure for DG limits achievement of potential
- Regulatory development hasn't kept pace with technology development
- All stakeholders need to be engaged
- Technology development is becoming commercial

# US - Consumer Energy Council

- Convened 2 year DG Domestic Policy Forum
- Results recently published
  - Benefits of DG can be realised through coordinated action. However major challenges and concerns to be addressed.
- Drivers
  - State of electricity transmission infrastructure
  - Demands for high reliability and quality of supply
- Electricity distribution system not designed for flow from multi generators to multiple buyers

# Common Drivers

- Changing industry structures
- DG is actually about distributed energy / resources
- DG - role in competitive markets
- Some new technologies reaching maturity
- Customer choice
- Aging infrastructure
- Growth of importance of reliability and quality
- Regulatory and interconnection issues to be addressed

# US - Research Institutions

- Number of institutions have set up DE/DG programs
- Areas of energy markets, technologies and regulatory environment
- Extensive number of information sources, conferences, market surveys, technology monitoring
- Questions being addressed
  - How will DG markets evolve?
  - What technologies will be winners?
  - What do energy users want?
  - How can different parties approach DE?

# US - Commercial Research

- DG seen as method for enhancing reliability and quality
- Cost sharing between Govt and companies
- Recently US\$18.5 mil for packaged cooling, heating and power systems development by companies
- Number of failures because of the high cost
- Temptation to force-fit DG into wrong places
- No one wants to own a DG system unless they have a real power availability, cost reliability, quality problem

# Europe

- Major EU conference in Sept
  - How renewable energy and DG for heating / cooling and electricity can
    - combat GHG
    - reduce atmospheric pollution
    - improve security and diversity of energy supply
- Substantial issues to address on integration into existing energy networks
- Regulatory aspects that influence use of DG
- CHP significant feature of DG in Europe

# United Kingdom

- Pursuit of DG through initiatives for CHP, embedded generation, renewable generation
- Significance recognition that many DG technologies relate to heat supply with large efficiency benefits
- Working Group on network issues
  - issues of access for embedded generation to distribution networks
- Payment of shallow rather than deep connection charges for embedded generation
- Exemption for CHP of climate change levy
- Renewables obligation