

Distributed Resources in Restructured Energy Markets in Illinois

**Institute for Regulatory Policy Studies
Illinois State University, Normal IL
May 18, 2000**

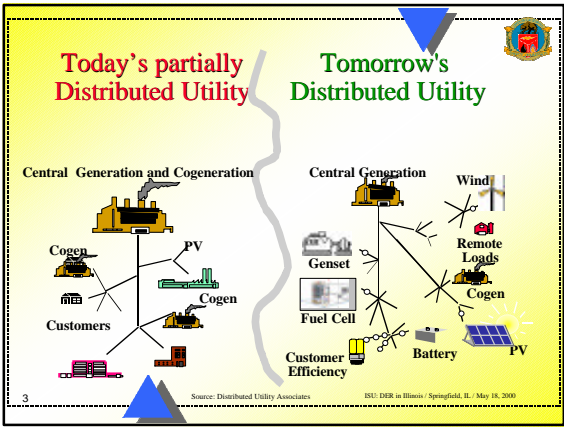
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Overview...

- ◆ Distributed Generation and Regulation
- ◆ Legislative Considerations
- ◆ Environmental Implications of DG
- ◆ Regulatory Activities
- ◆ Wrap up

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Restructuring.....

Natural gas and electricity markets are in the throes of restructuring

- ◆ Competitive markets
- ◆ Promote customer choice
- ◆ Finite role of the utility
- ◆ Obligation to serve
- ◆ Revenue cycle services

Coming Attractions Under Construction

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Legislative Considerations

- ◆ AB 1890 - Implemented in 1996 - Electrical Restructuring
- ◆ SB 90 - Implemented in 1997 - PIER Program Funding; DER benefits
- ◆ SB 477 - implemented in 1997 - Authority to regulate electricity service providers
- ◆ SB 735 - Role of Energy Efficiency and Distributed Generation in Grid Planning

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AB 1890

In a nutshell, Legislature's intent is to develop a competitive electricity industry, including:

- Competitive.....
- Economic.....
- Affordable.....
- Safe.....
- Environmental..
- Reliable.....

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AB 1890....

Legislature's intent to provide competitive, low cost and reliable service competitively is done by:

- ◆ Ensuring the transition is quick
- ◆ Immediate rate reduction of 10% followed by an additional 10% in March 2002
- ◆ Create the Power exchange, the independent Systems Operator and the Oversight Board
- ◆ Recovery of transition costs

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Environmental Considerations

Siting, Permit streamlining, pre-certification, air quality & emissions related issues

- ◆ Air quality impacts as measured by emissions
- ◆ Public health and safety hazards
- ◆ Locational attributes
- ◆ local air district considerations
- ◆ Conformance with EPA standards

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Siting & Permitting issues

<p style="text-align: center;">Planing and permit Streamlining</p> <ul style="list-style-type: none"> ◆ Long-term perspective ◆ Land-use issues ◆ cost effectiveness ◆ Building standards ◆ Fire & safety hazards 	<p style="text-align: center;">Siting & Environmental considerations</p> <ul style="list-style-type: none"> ◆ Air quality ◆ land-use issues ◆ waste management ◆ locational issues ◆ public safety
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Siting & Permitting issues

Agencies involved in these considerations

- ◆ Planning agencies
- ◆ Permitting & public works
- ◆ local air quality districts
- ◆ Buildings permit authorities
- ◆ Field inspectors / engineers
- ◆ Fire / Health departments
- ◆ Air resource Board / EPA

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Air Quality Impacts of DER

- ◆ Study done by EPA on a national level and by the California Air Resources Board
 - ▾ Economic analysis basis from a utility and customer perspective
 - ▾ Baseload Vs. Peaking applications
 - ▾ Final Report to be issued in June, 2000

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CEC Activities in Environmental Issues

- ◆ Workshop held at CEC to scope issues on environmental quality and permit streamlining
 - ▾ Can some DGs qualify for streamlining?
 - ▾ Air quality concerns and issues?
 - ▾ How to deal with large number of DGs?
- ◆ CEC-EPRI study on DG emission pre-certification methods

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Peek Into California's Activities

Order Instituting Rulemaking
R.98-12-015 & 99-DIST-GEN(1) & 99-A-1-DG

- ◆ Joint collaborative proceeding between the CPUC, CEC and the EOB
- ◆ Address Distributed Generation & Distribution Competition
- ◆ Timeline: Dec'98 - Aug'99

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CPUC Rulemaking

- ◆ Decision 99-10-065 provides a roadmap for dealing with barriers to effective DER deployment
 - ✦ Lack of uniform interconnection standards
 - ✦ Rate design and cost allocations issues (standby, backup tariffs)
 - ✦ Role of utilities in ownership and control
 - ✦ Operational and system planning issues

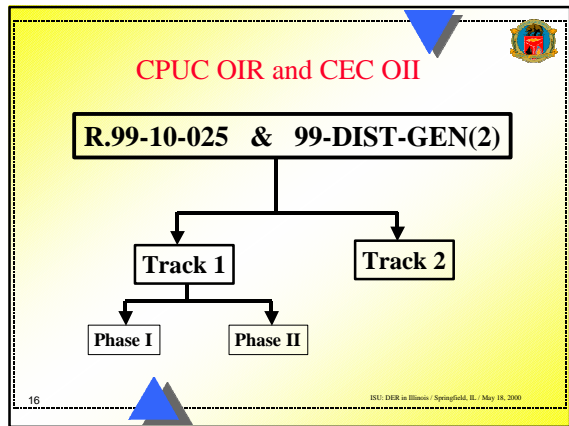
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Second Round: California's Activities

Order Instituting Rulemaking
CPUC: R.99-10-025 & CEC 99-DIST-GEN(2)

- ◆ Maintain joint collaborative proceeding
- ◆ Address interconnection standards and CEQA issues at the CEC
- ◆ Address distribution competition and rate design issues at CPUC

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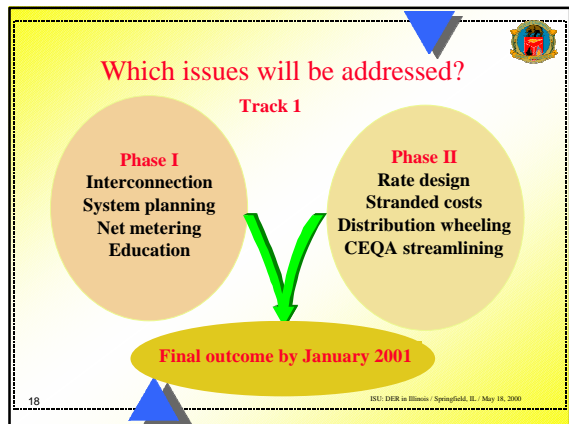


Changing a Regulated Environment...

Recognize, identify, address and resolve issues

- ◆ Who are the players?
 - ✦ Manufacturer's and developer's role, market, penetration, options
 - ✦ Utility's role, ownership, operations
 - ✦ Customer focus, education, choice, safety and concerns
- ◆ Who are the main agencies?
 - ✦ California Energy Commission (CEC)
 - ✦ California Public Utilities Commission (CPUC)
- ◆ OII and OIR initiated to address these issues

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Interconnection....

CEC, Phase I Process

- ◆ CEC formed two groups - Technical and Non-technical to develop strawman proposals
 - ✦ Rule 21 Language
 - ✦ Minimum Compliance requirements
- ◆ Single document envisioned in the process
- ◆ Develop recommendations on interconnection rules for California
 - ✦ Tie-in with IEEE national standards development.

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Rate design and related issues

CPUC, Phase II Testimony

March 29 Workshop at CPUC addressed rate design issues. 36 Questions posed to parties.

- ◆ Each Utility to provide a document describing their standby charges and definitions
- ◆ Testimony to be filed May 26th, including:
 - ✦ stranded costs, implementation costs,
 - ✦ standby, bypass, and distribution wheeling rates,
 - ✦ Performance-Based Ratemaking (PBR) mechanisms,
 - ✦ potential impact of DG on public purpose programs.

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Which issues will be addressed?

Track 2

- ◆ Role of the UDC
- ◆ Distribution Competition

Staff study on broad issues, but no formal proceedings planned at this point.

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Additional Information

- ◆ CEC Proceedings: www.energy.ca.gov/distgen/
- ◆ CPUC Proceedings: www.cpuc.ca.gov/distgen/index.htm
- ◆ Existing Utility Interconnection Rules
 - ✦ PG&E: www.pge.com/customer_services/business/tariffs/
 - ✦ SCE: www.sce.com/regulatesca/index_re.htm
 - ✦ SDG&E: www.sdge.com/tariff/bus_tariff.html
- ◆ Texas Interconnection Rule
www.puc.state.tx.us/rules/rulemake/21220/21220arc/21220arc.cfm
- ◆ New York Interconnection Process
www.dps.state.ny.us/distgen.htm

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To achieve DG deployment

Four Pronged Approach

Technology
Interconnection
Communication

Competition &
Role of the UDC

Success in DG Land

Air quality /
Permitting &
Siting

Policy, Rates
& Tariffs

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Questions.... ?

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