



**Distributed Generation**



# Central Plants and Transmission & Distribution (T&D)



# Generation near centers of consumption

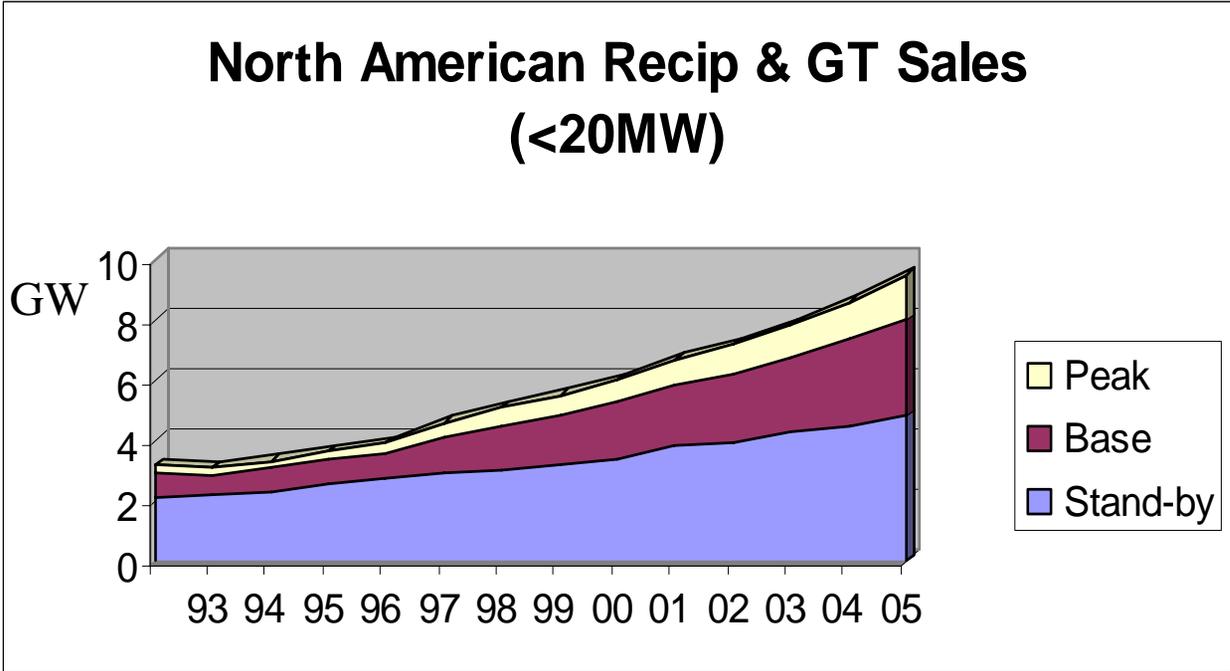


# Distributed Generation

- **DG benefits to customer**
  - Reduced exposure to price volatility
  - Reduced cost for thermal load (CHP opportunity)
  - Increased power reliability
- **DG benefits to Utility**
  - Avoidance/deferral of system capacity increase
  - Deferral of T&D upgrades
  - Reduced T&D losses
  - Voltage support
  - Relief of transmission congestion
  - Reduce reserve margin
  - Improved reliability, availability and power quality
  - Avoidance of T&D siting concerns

# Distributed Generation

More than 60 GW of reciprocating engines and small gas turbines (<20MW) installed in North America



Source: A.D.Little

# Mobile Power Unit - Peaking

- 5 & 14 MW Configurations
- Easy to Install & Relocate
  - No Concrete Foundation
- Easy to Permit
  - 25 mmpv (gas fired)
  - Sound Attenuated Package



- Designed for Remote Operation
- Highest Power Density Available
  - Ideal for Urban installations

## 50 MW distributed generation site



## Barriers to DG

- Concern over safety. Risk of connected generator continuing to operate when distribution feeder is down
- Concern about losing the best high load-factor customers
- Concern for stranded assets and costs
- Concern about “dirty diesel gen sets”
- Concern over loss of revenue.

# Solutions

- Change the regulatory climate
- Rate decoupling
- Performance-based rate making
- Output-based emissions standards
- Revisit restructuring models

# ELECTRIC CO.

WE'VE GOT TO  
FIND A BETTER  
WAY TO HANDLE  
PEAK DEMAND...

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## **Distributed Generation**

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