Merchant Electric Industry

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Duke Energy North America

Advancing the Gas Turbine Industry
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Topics

- Duke Energy Corporation
- Duke Energy North America
- Market Trends
- Generation Trends

Duke Energy Corporation

Energy Services	Duke Power	Energy Transmission	Duke Ventures	Field Services
North America & International Wholesale	**Franchised Electric**	**Wholesale Transportation**	**Diversified Businesses**	**Gathering & Processing**
• Merchant gas & power assets • Commodities trading • Origination • EPC & Operations • Industrial services	• Regulated North & South Carolina • 19,000 MW base • 2 million customers	• Natural gas • Electricity • Petroleum products	• Real estate • Telecom • Finance	• Largest US producer of NGLs

Duke Energy North America

Develop and actively manage a portfolio of strategic energy assets

Deliver energy solutions to large wholesale customers and aggregators in major markets

Manage and trade energy positions and risks

Timing & Execution

Asset Position

Build or acquire initial asset position in right-priced markets

- Gas & power
- Strategically positioned
- Cross border/ regional opportunities

Follow-on Investments

Leverage initial position to

- Build critical mass
- Balance regional portfolio
- Expand customer base
- Capture business synergies

Arbitrage Position

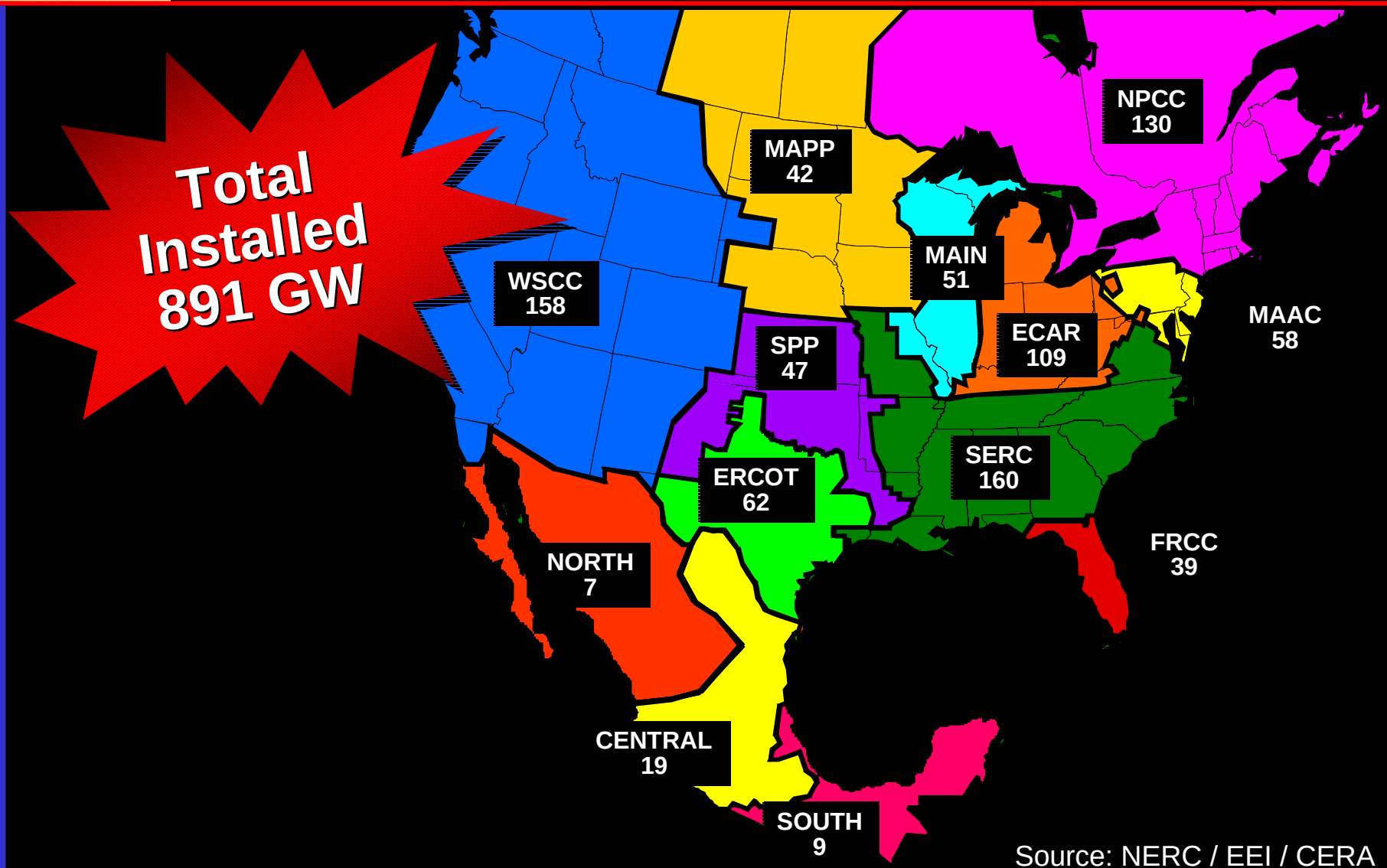
Build or acquire arbitrage business in converging/integrating markets

- Gas & power
- Risk management
- Energy trading
- Origination
- Logistics & optimization

The 21st Century Customer

Traditional	Merchant
Regulated Market	Competitive Market
Single Focus	Network Focus
Long-Term Optimization	Real-Time Optimization
Obligation to Serve	Profit Maximization
LDC, Utility, Producer	Energy Merchant

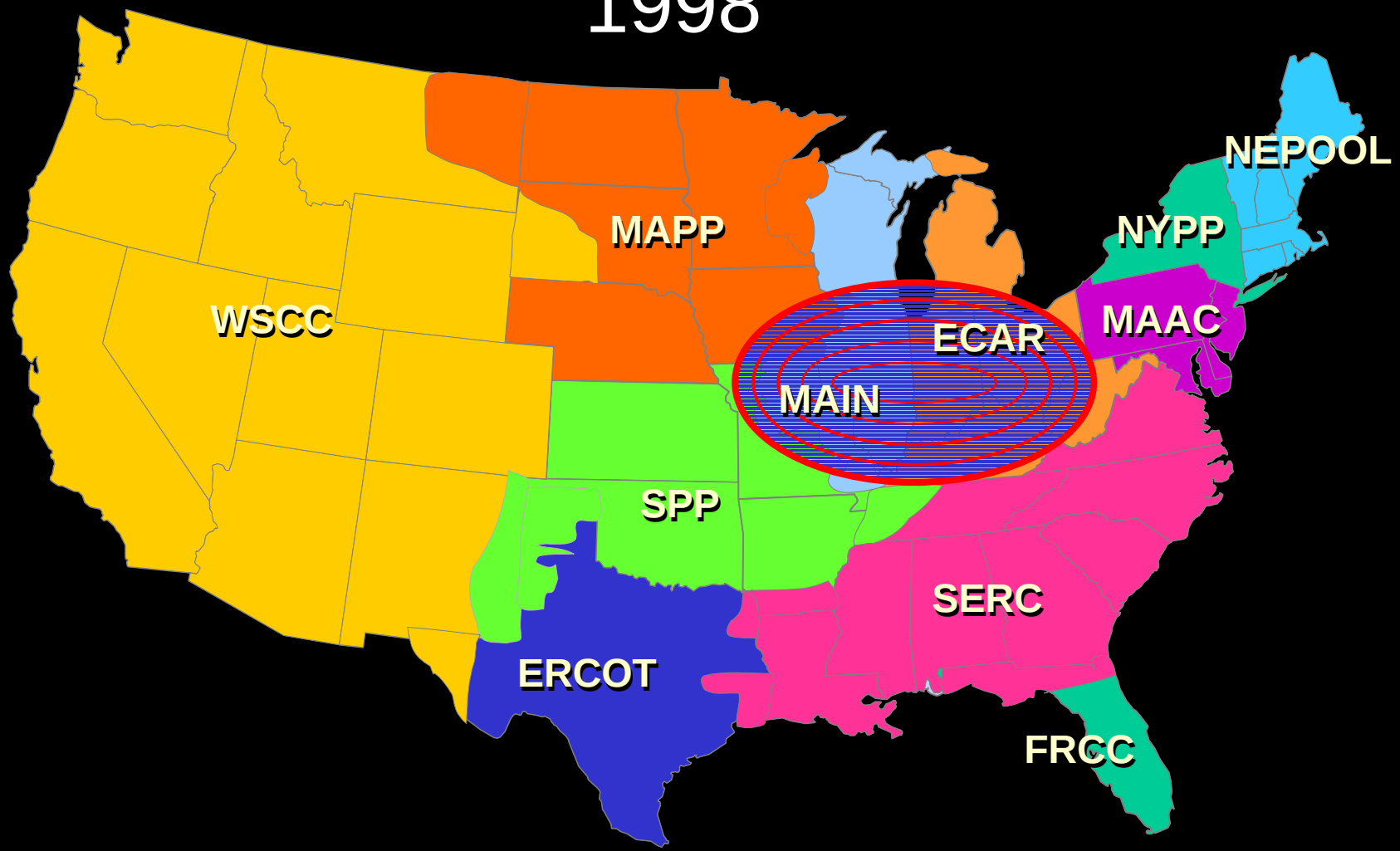
North American Market
1998 Installed Capacity (GW)



Source: NERC / EEI / CERA

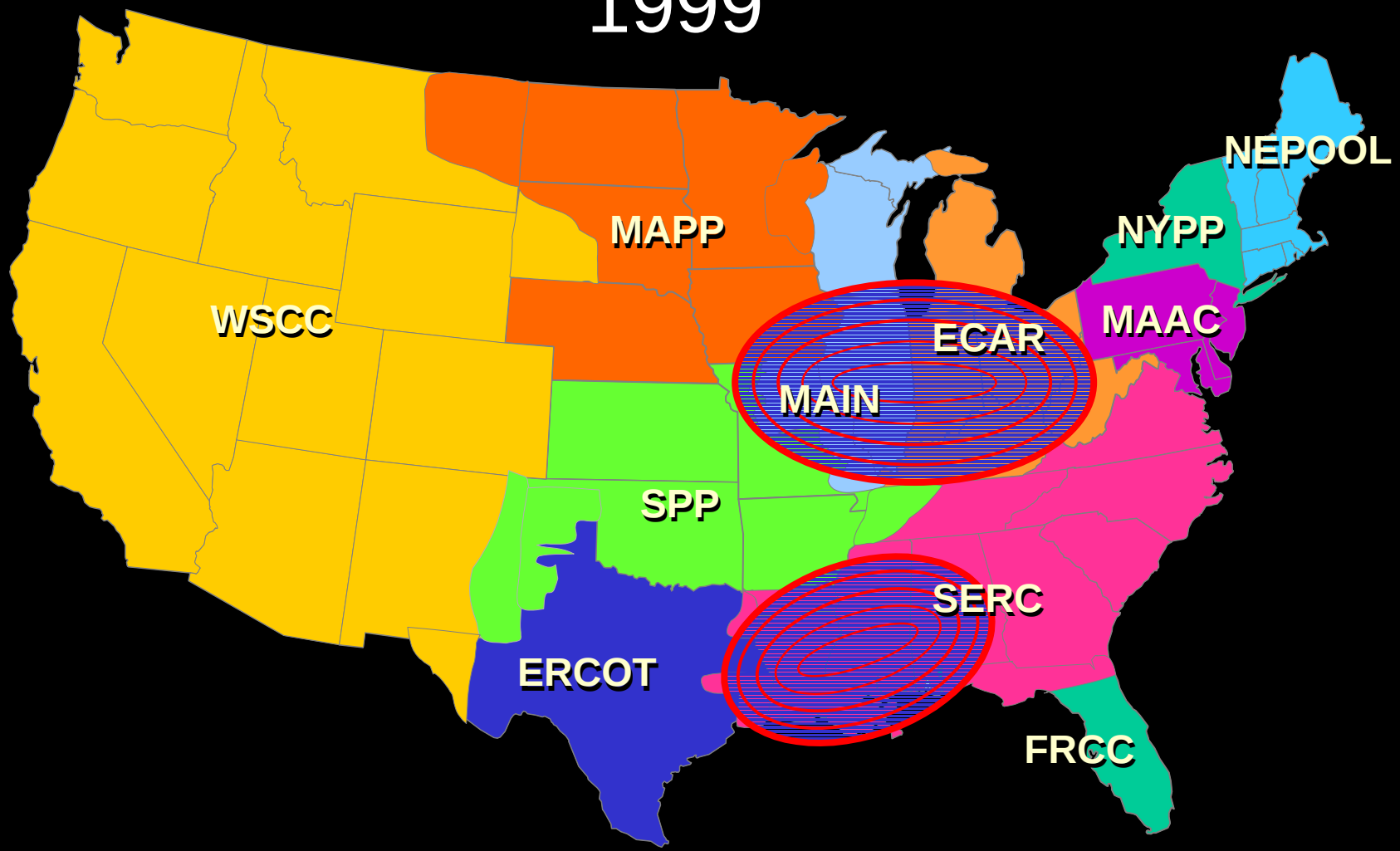
North American Hotspots

1998



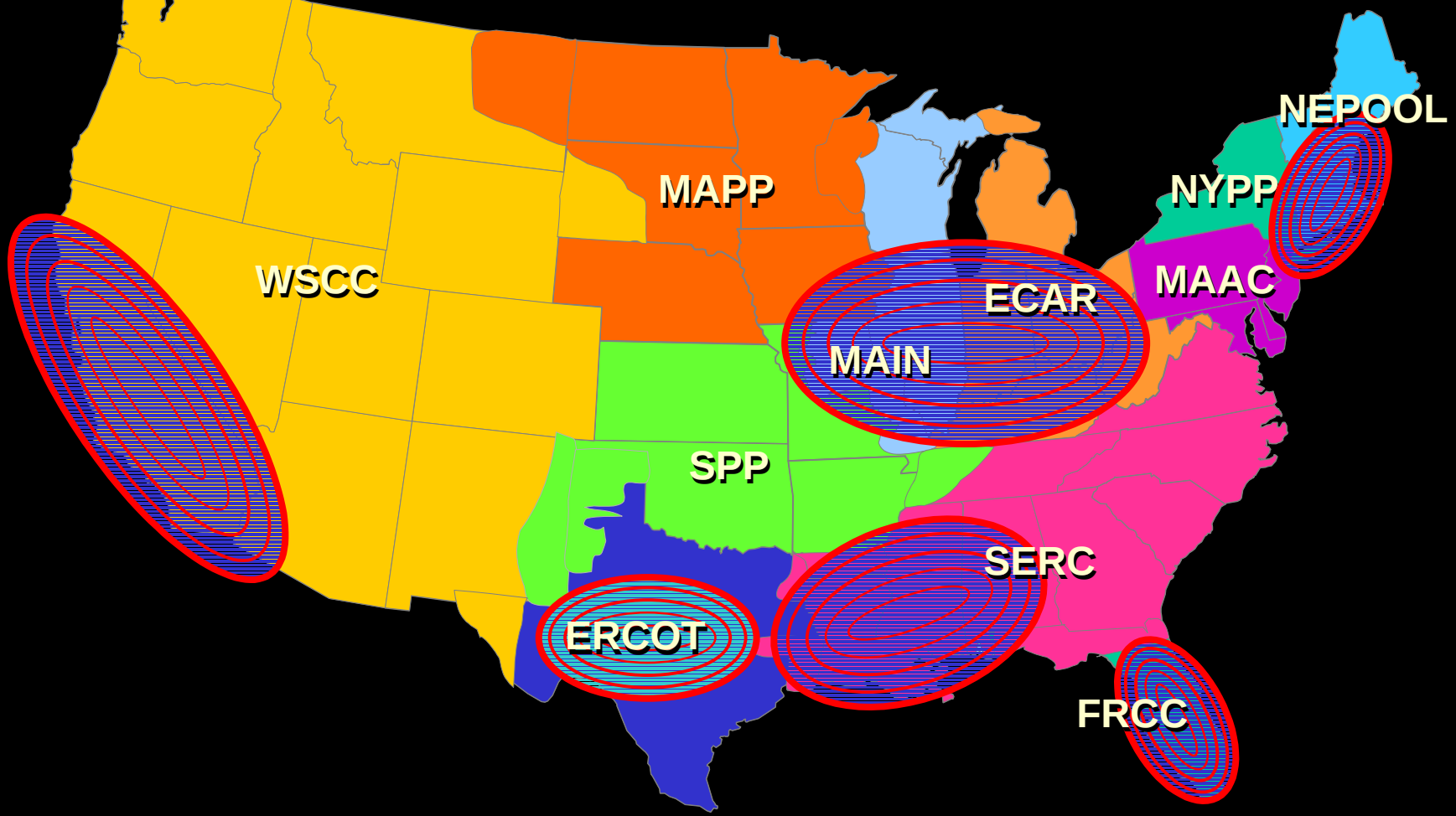
North American Hotspots

1999



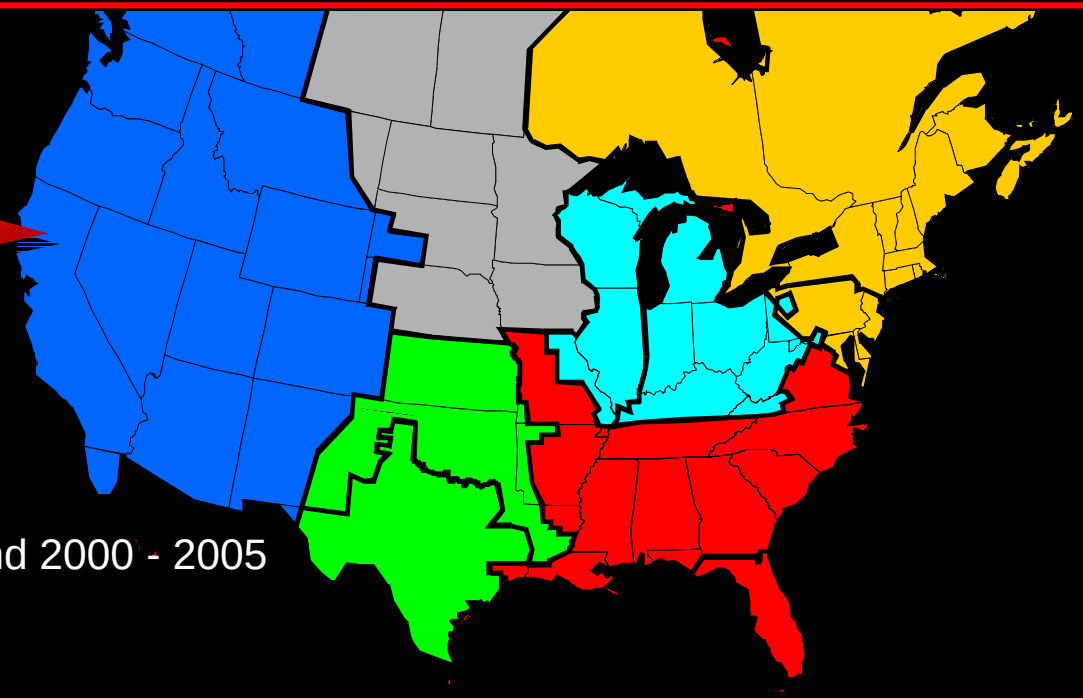
North American Hotspots

2000 Forward

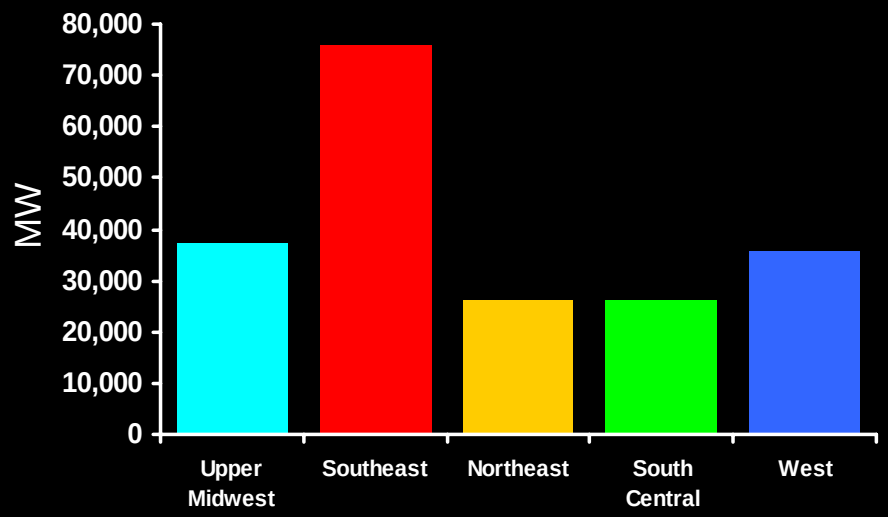


Future Needs

Total Needed 210,000 MW

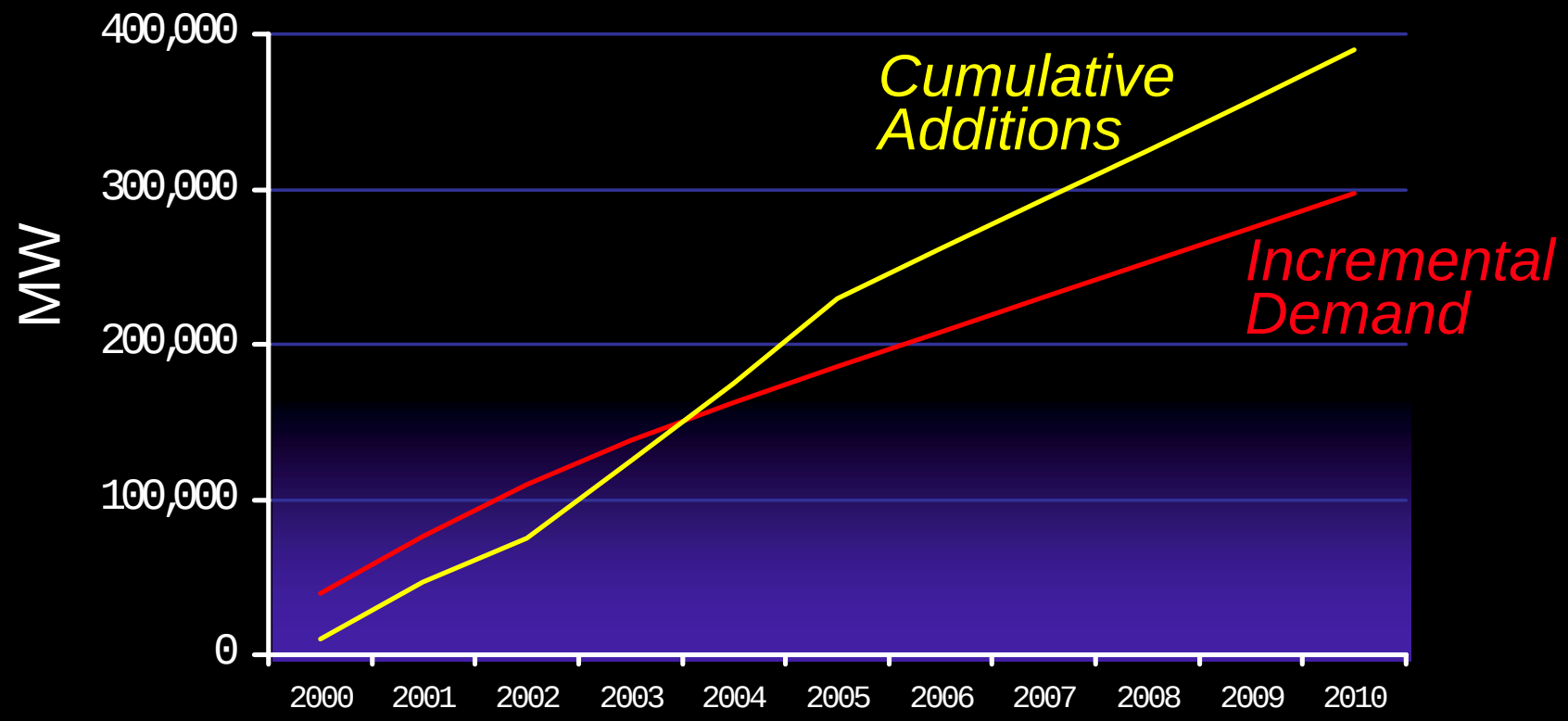


Power Demand 2000 - 2005

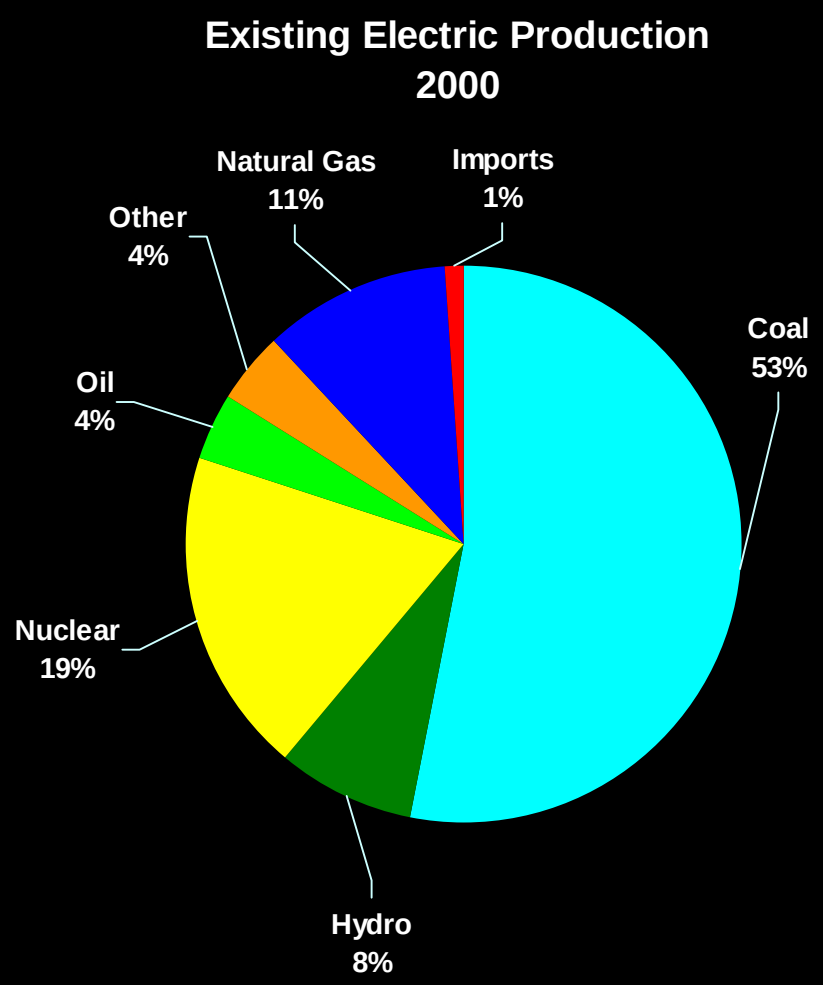


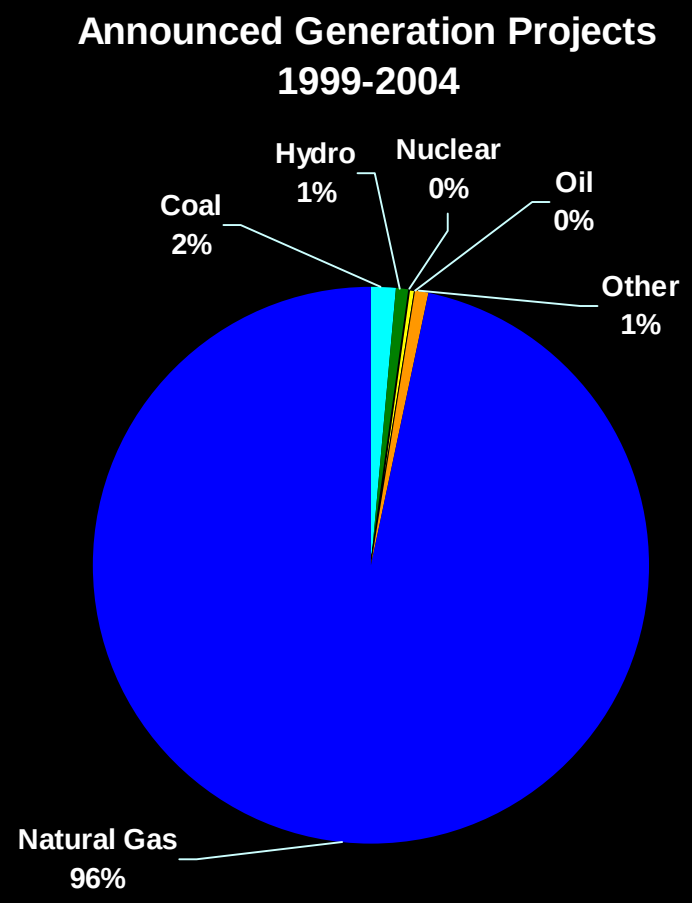
Source: NERC / EEI / CERA

The Future


400,000
300,000
200,000
100,000
0
MW
Cumulative Additions
Incremental Demand
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010

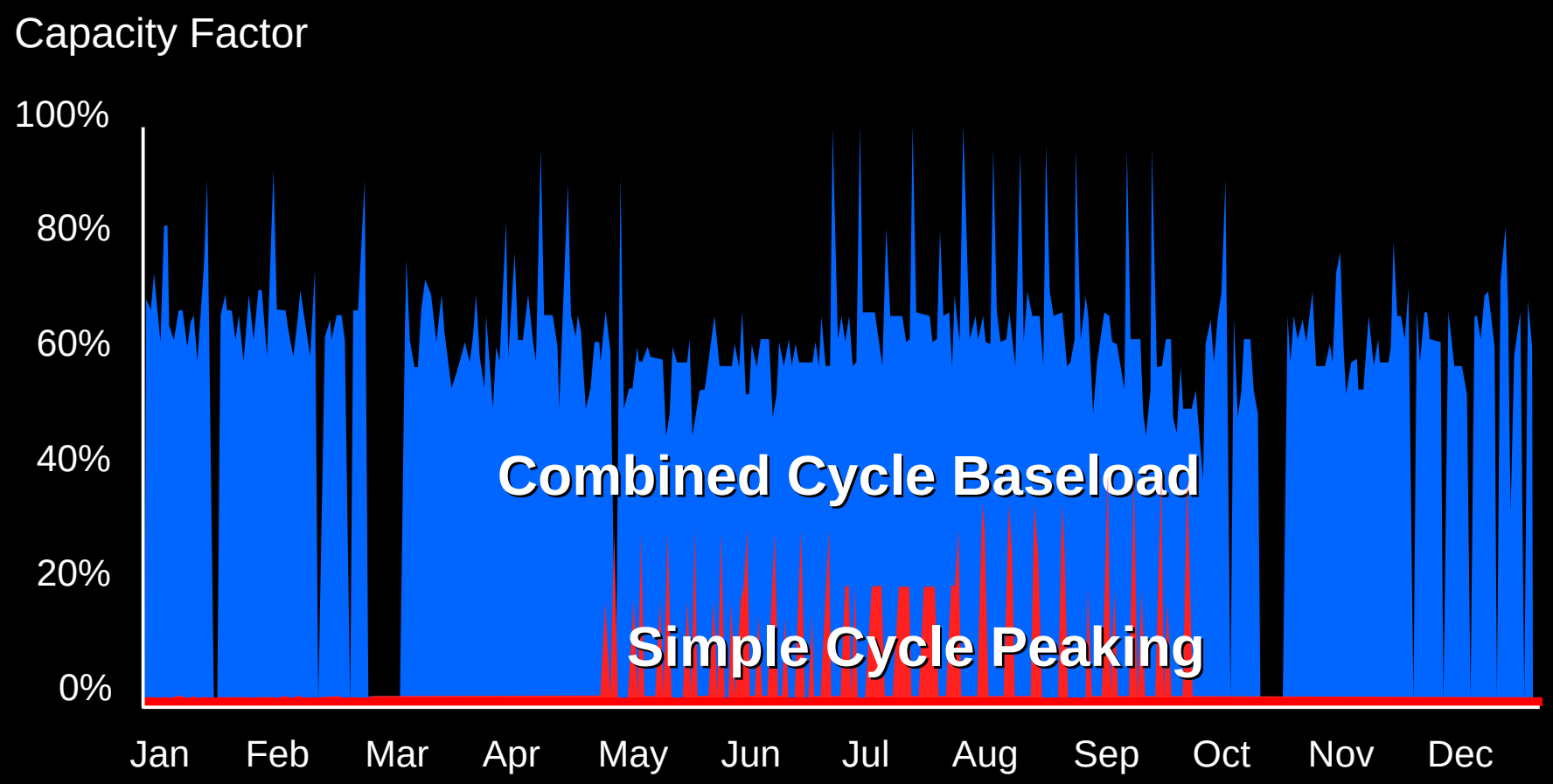
Generation Types



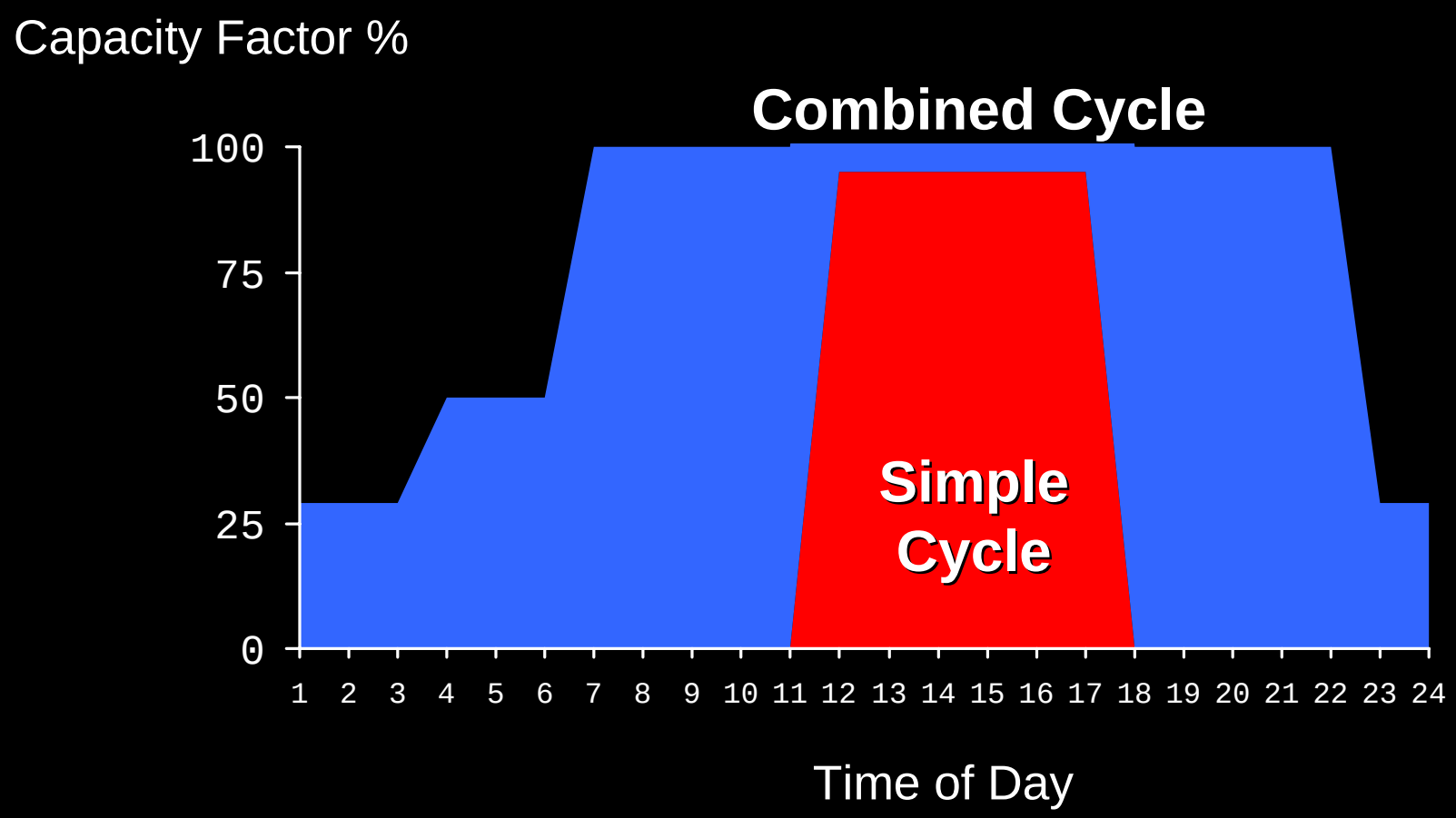


Source: CERA

Annual Run Profile



Typical Day-Run Operating Profile



DENA Gas Turbine Facilities

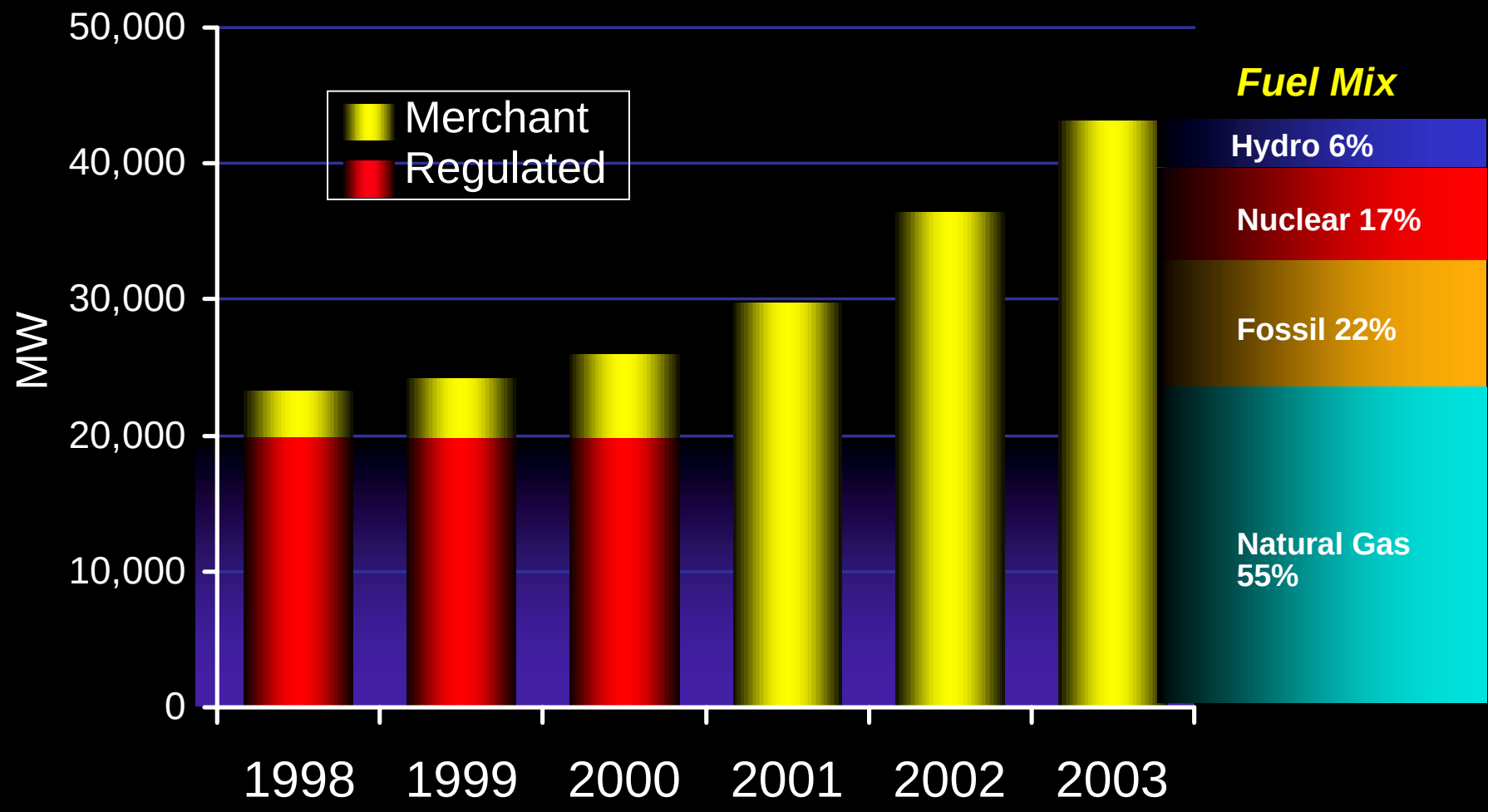
Simple Cycle

- Peaker
- 10,000 Btu/kWh
- < 25% load factor

Combined Cycle

- Base
- 7,000 Btu/kWh
- > 50% load factor

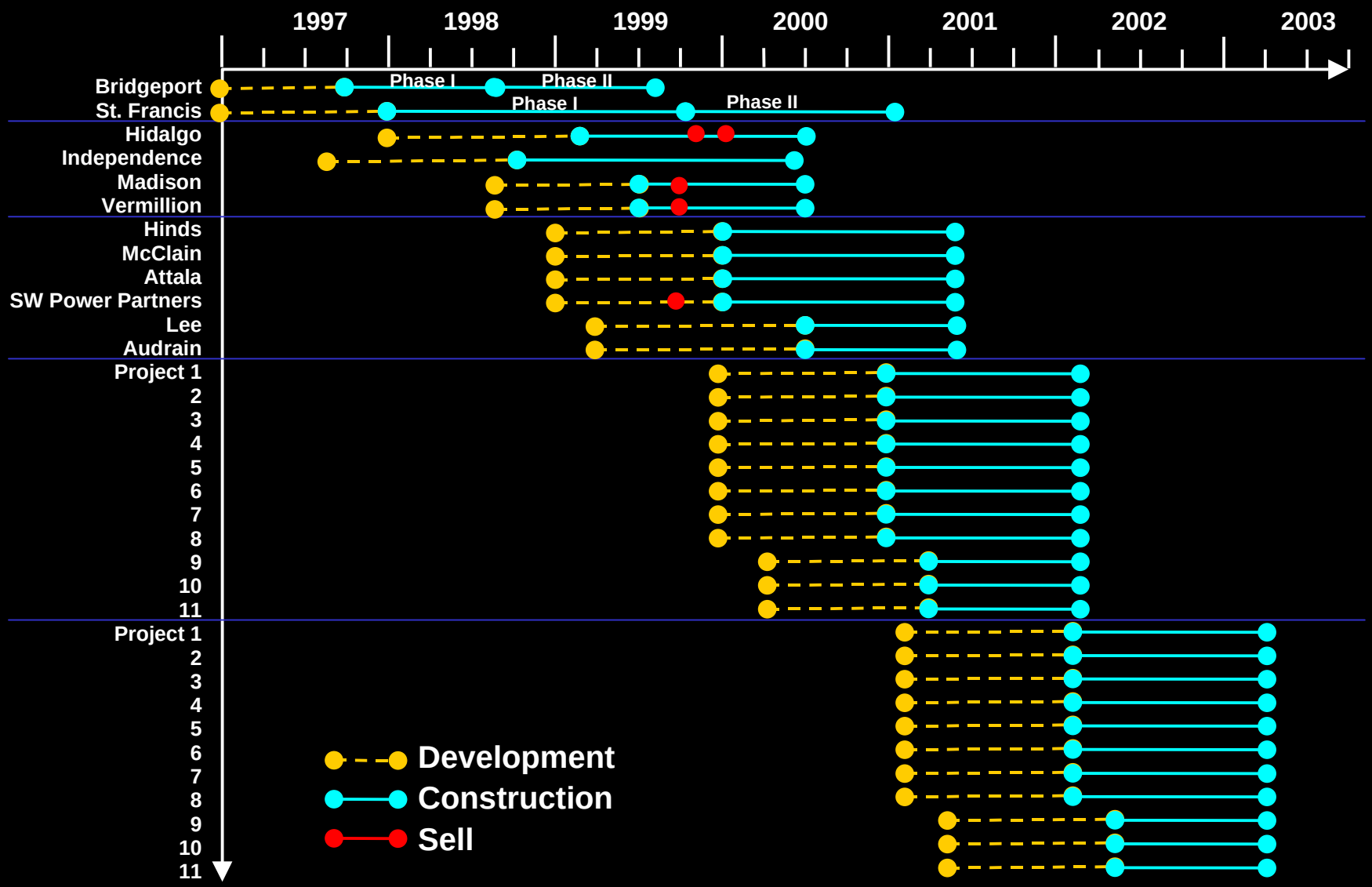
Merchant Generation Portfolio



Development/Turbine Commitment

Company	Operating/Under Construction (MW)	Advanced Development (MW)	Total (MW)	Turbine Commitment
DENA	10,000	13,500	23,500	GE
Calpine	10,000	10,000	20,000	S/W - GE
Dynegy	10,400	2,100	12,500	S/W
Reliant	7,800	7,100	14,900	GE
PG&E	14,100	6,200	20,300	S/W - GE - MHI

DENA Merchant Development Activity



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