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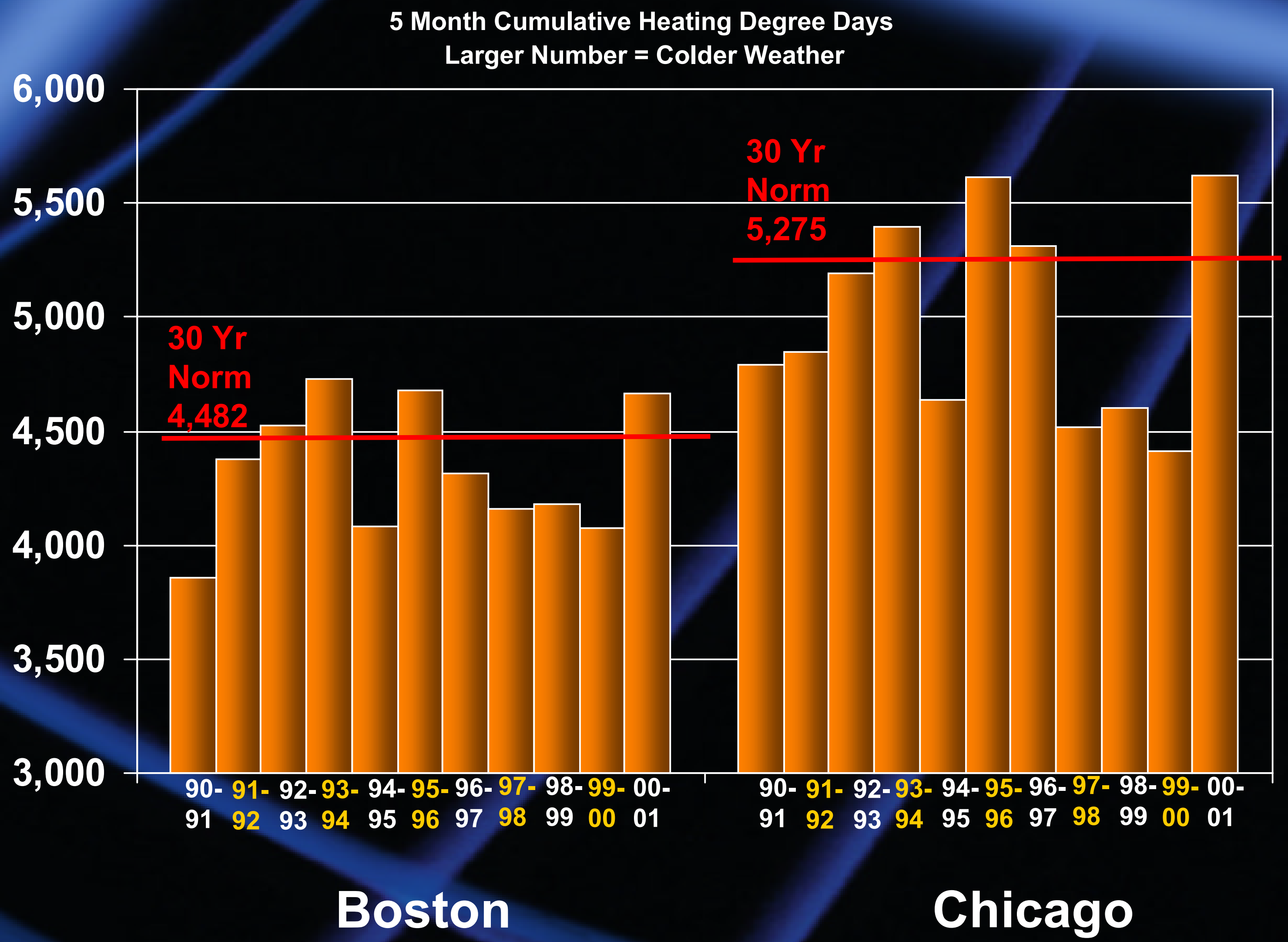
Natural Gas Storage
R&D Workshop
November 29, 2001

El Paso Pipeline Group

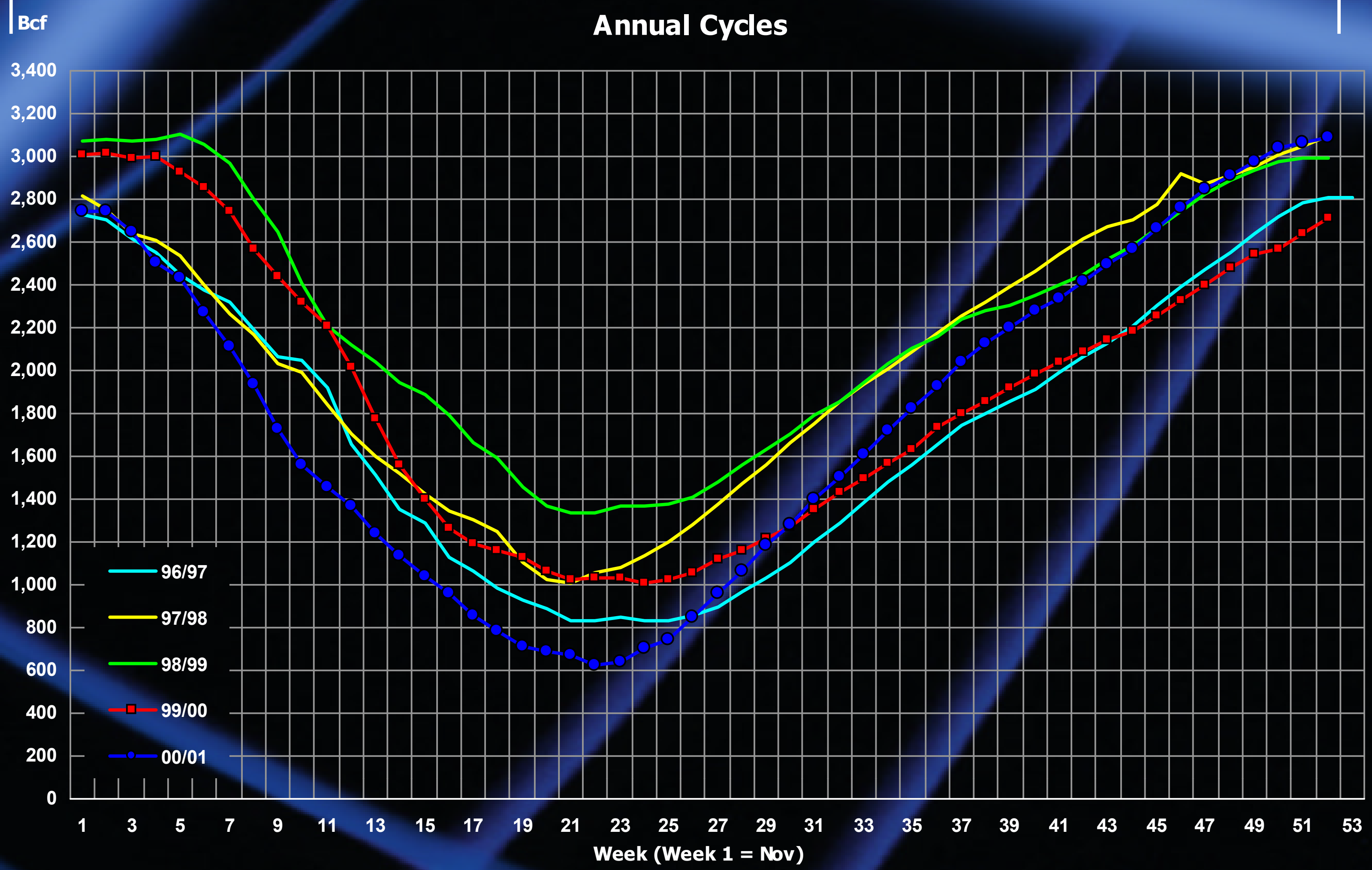
Agenda

- 2000-2001 Winter
- Power Gen Demand vs. Storage Injection
- Changing Nature of Storage
- Regional Outlook
- Future Expansion
- Summary

Last Winter: Cold But Not Unprecedented

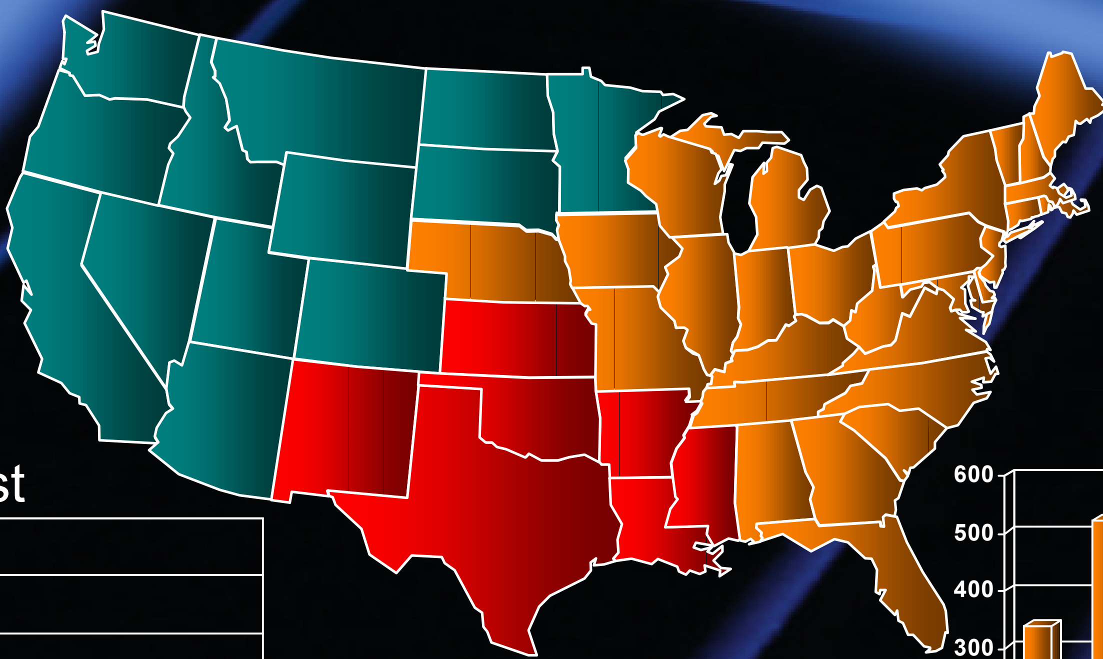


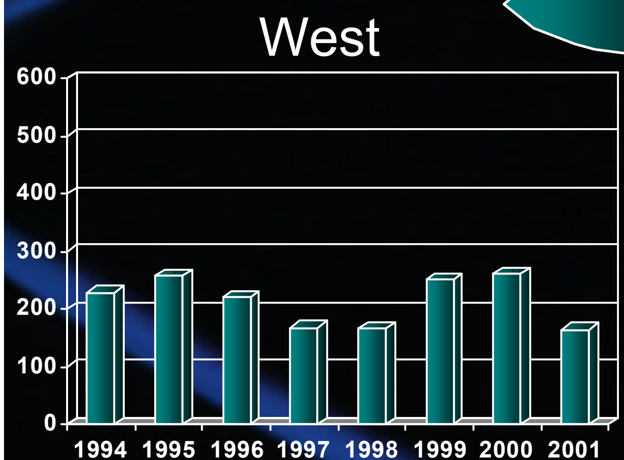
U.S. Storage Balances

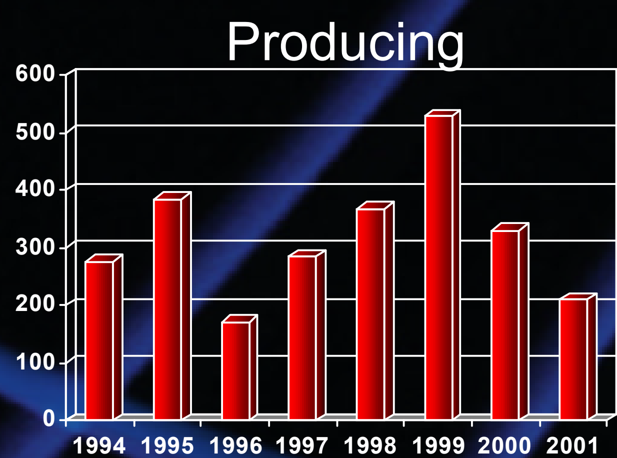


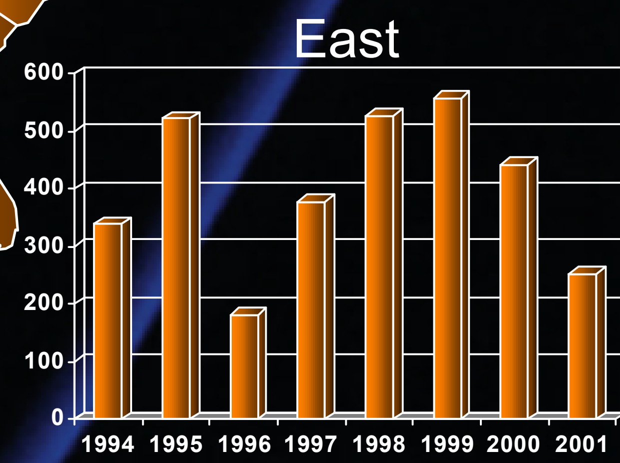
Source: American Gas Association (AGA) weekly reports.

End of March Storage Balances



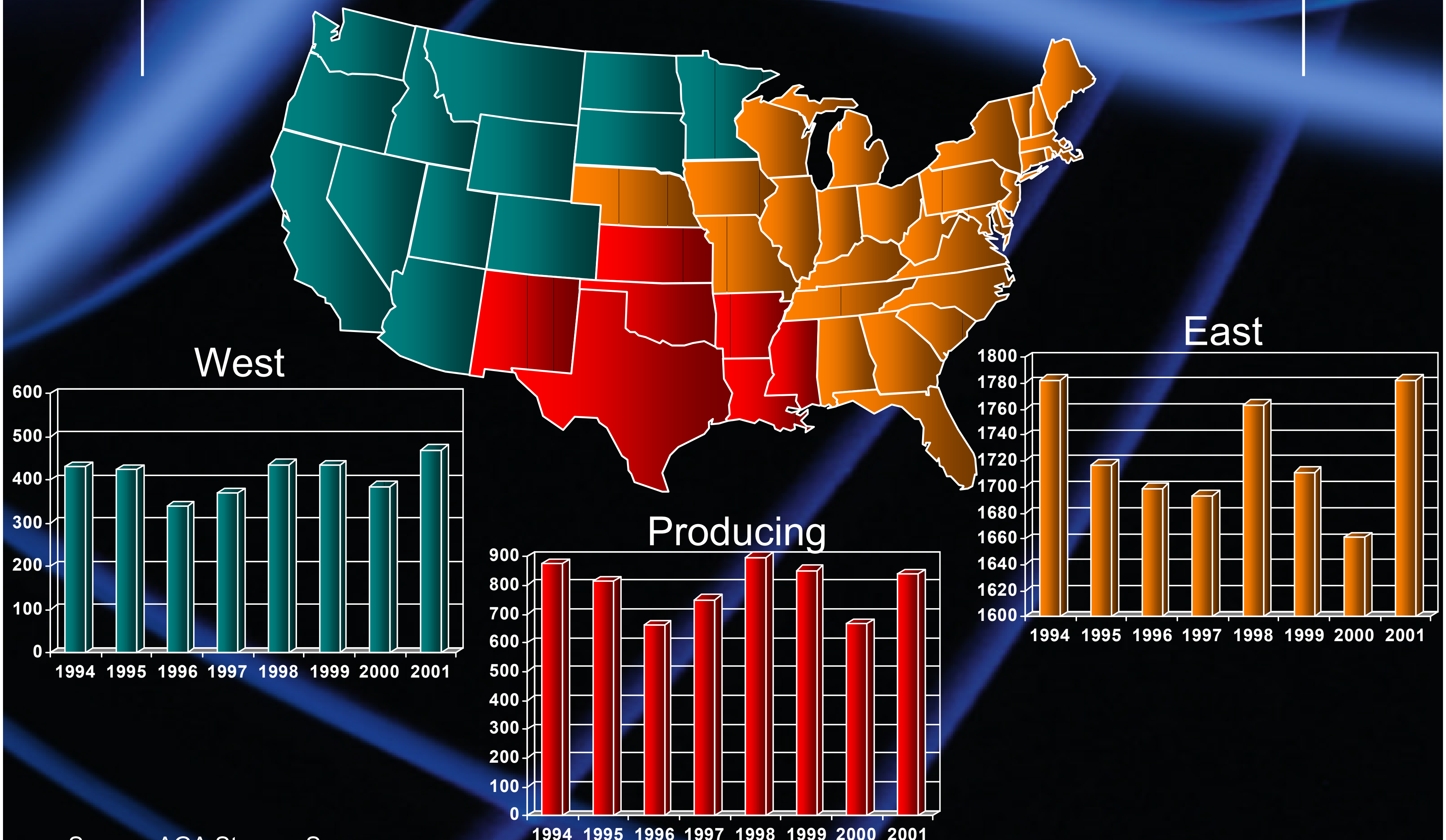






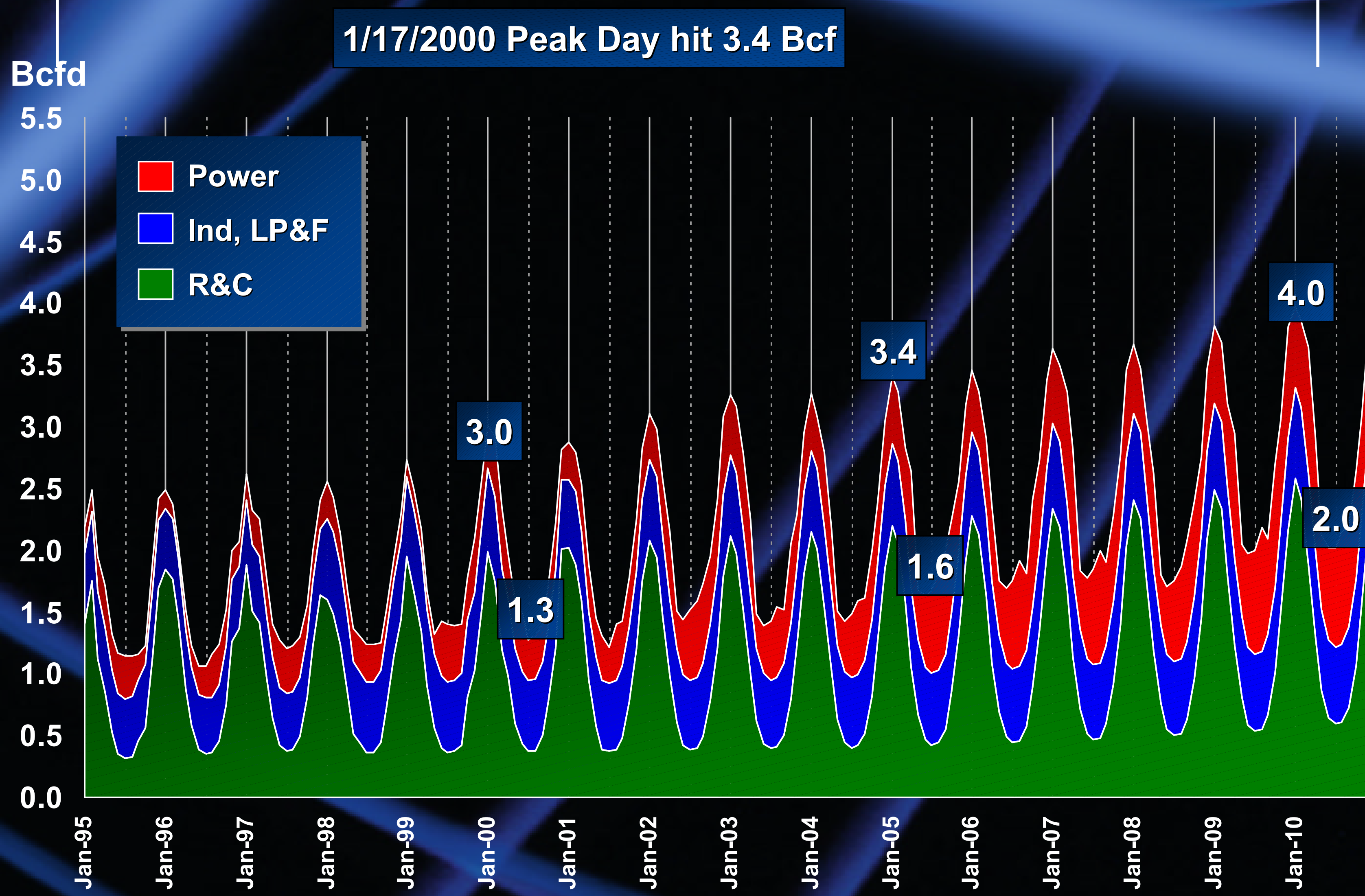
Source: AGA Storage Survey

End of October Storage Balances

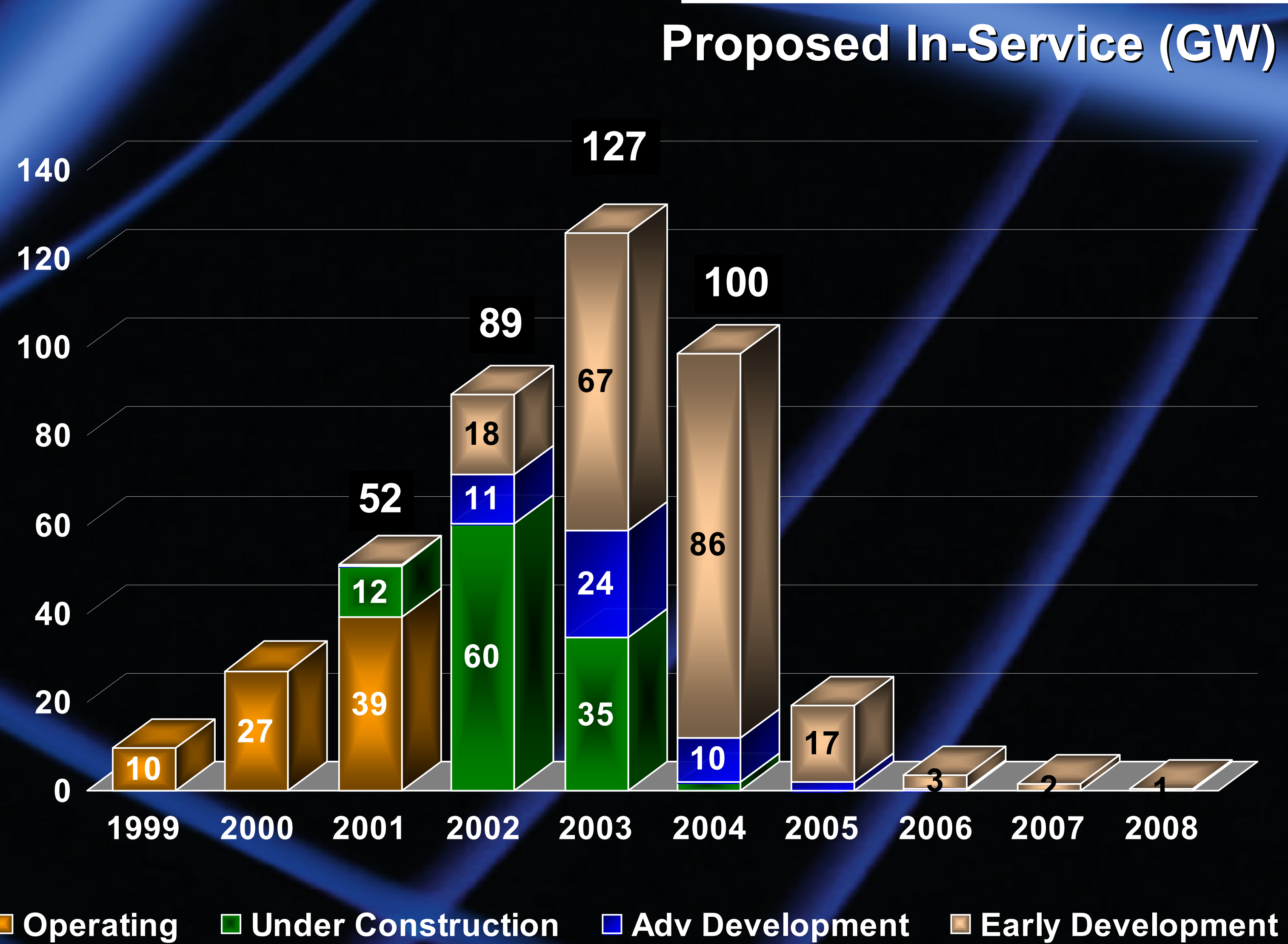


Source: AGA Storage Survey

New England Monthly Demand



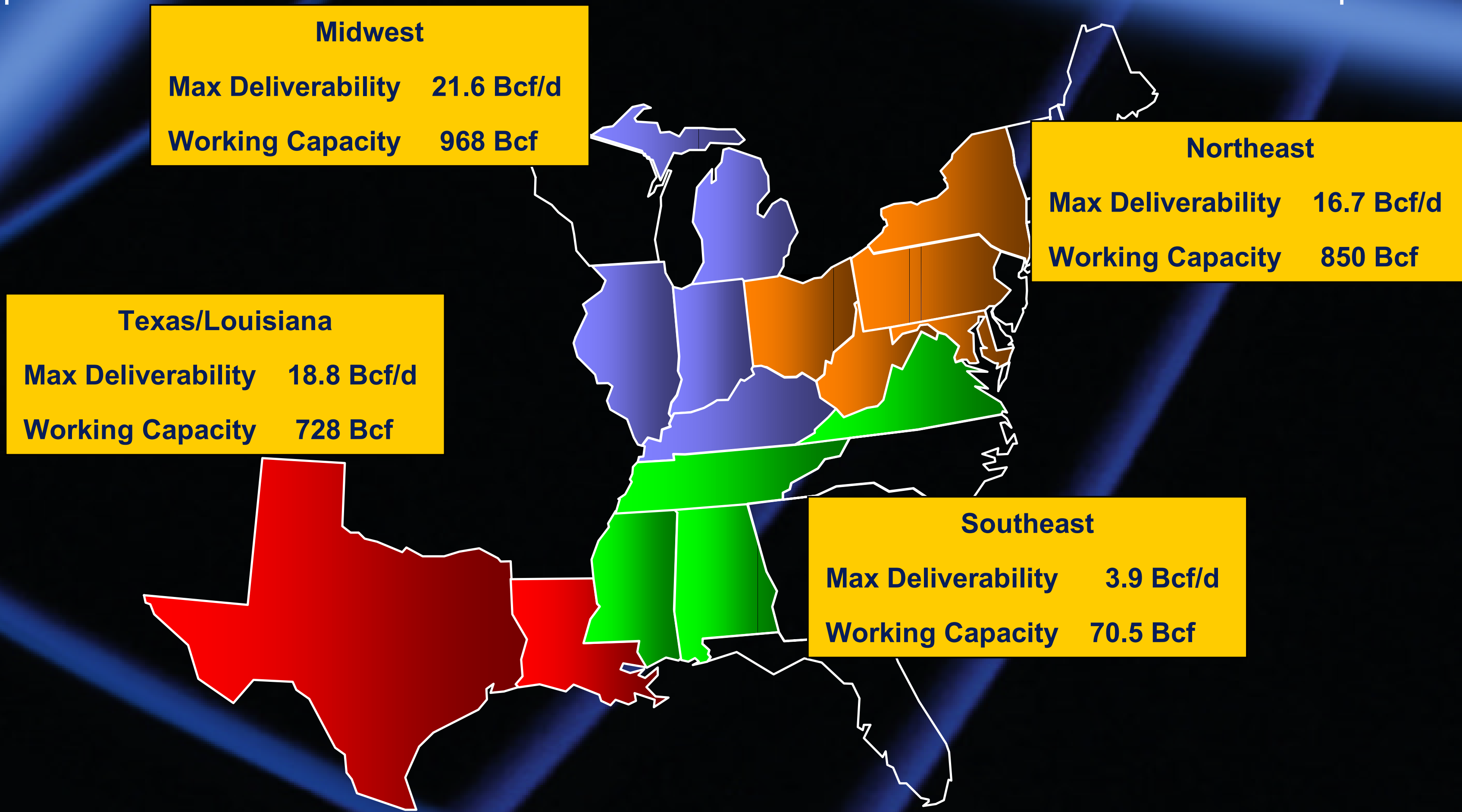
New Gas Plants



Storage Product Dimension

- Delivery Resource
- Transmission Surrogate
- Supply Insurance
- Seasonal Arbitrage
- Intra-seasonal Trading
- Trading Asset-Notional & Physical

Current Storage for Eastern US

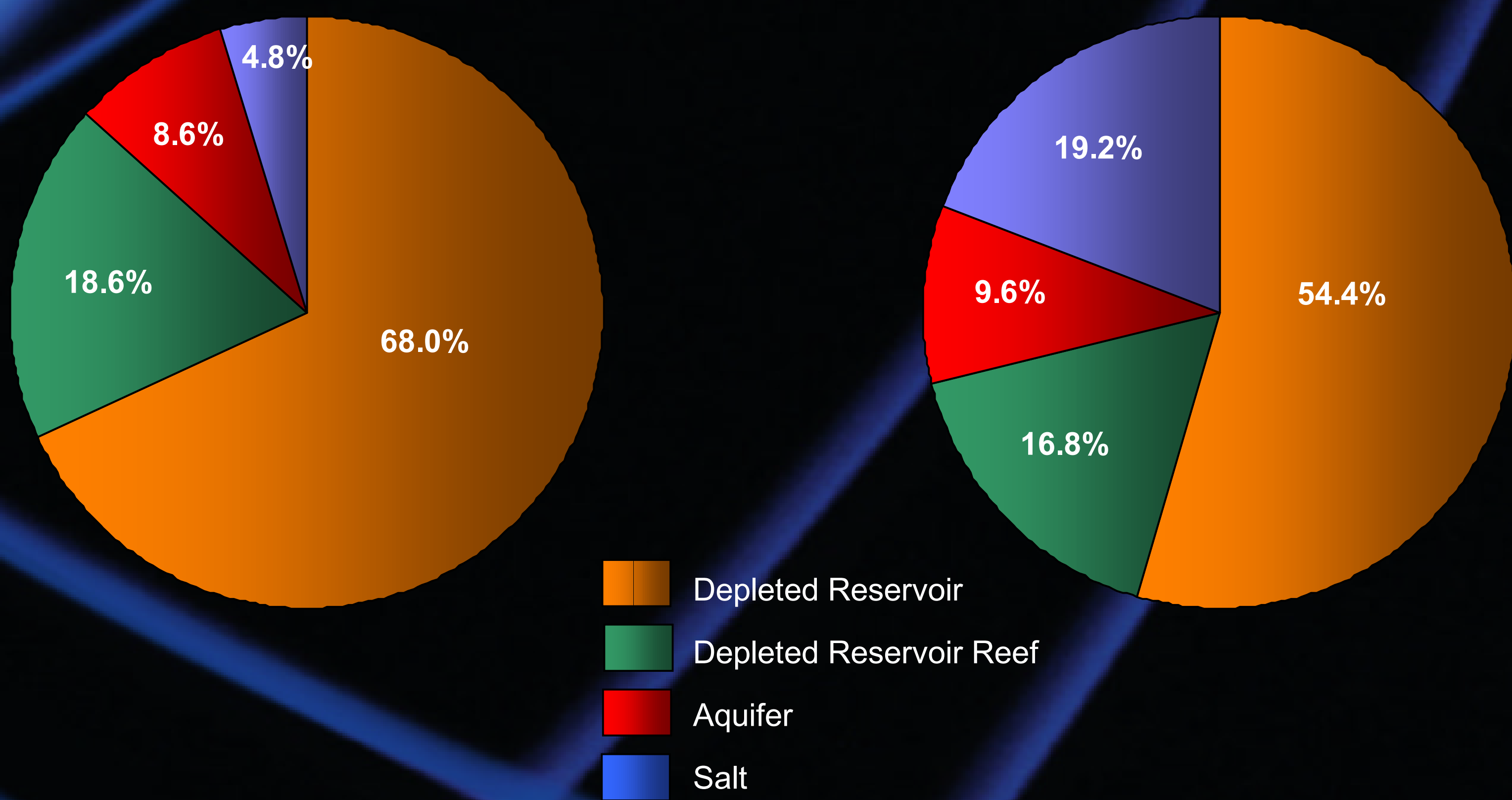


Source: International Gas Consulting

Geological Types of Storage: Eastern US/Southern Ontario

Working Gas Capacity

Maximum Deliverability



Source: International Gas Consulting

Northeast Storage Expansion Projects

			Working Capacity (Bcf)	Delivery Rate (MMcf/d)
1	Honeoye	Dep Reservoir	1.80	15
2	Seneca Lake II	Bedded Salt	.75	75
3	Stagecoach	Dep Reservoir	13.0	500
4	Tioga	Bedded Salt	6.0	500
5	Northeast ConneXion	Dep Reservoir	3.0	300

Source: International Gas Consulting / El Paso

Summary

- Growing demand and “normal” winters will test storage infrastructure
- Demands of fueling power generation could strain summertime storage refills
- Storage has evolved from a strictly physical asset to both a physical and trading asset
- Emphasis on gaining more flexibility from storage (along with supply and transport contracts)
- Changing flows and load patterns will lead to distributed deliverability solutions

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