

Perspectives from FERC

Session II: Resource Transformation

Session III: Resilience and Reliability

Federal Energy Regulatory Commission

Washington D.C.



FERC Commissioner Philip Moeller

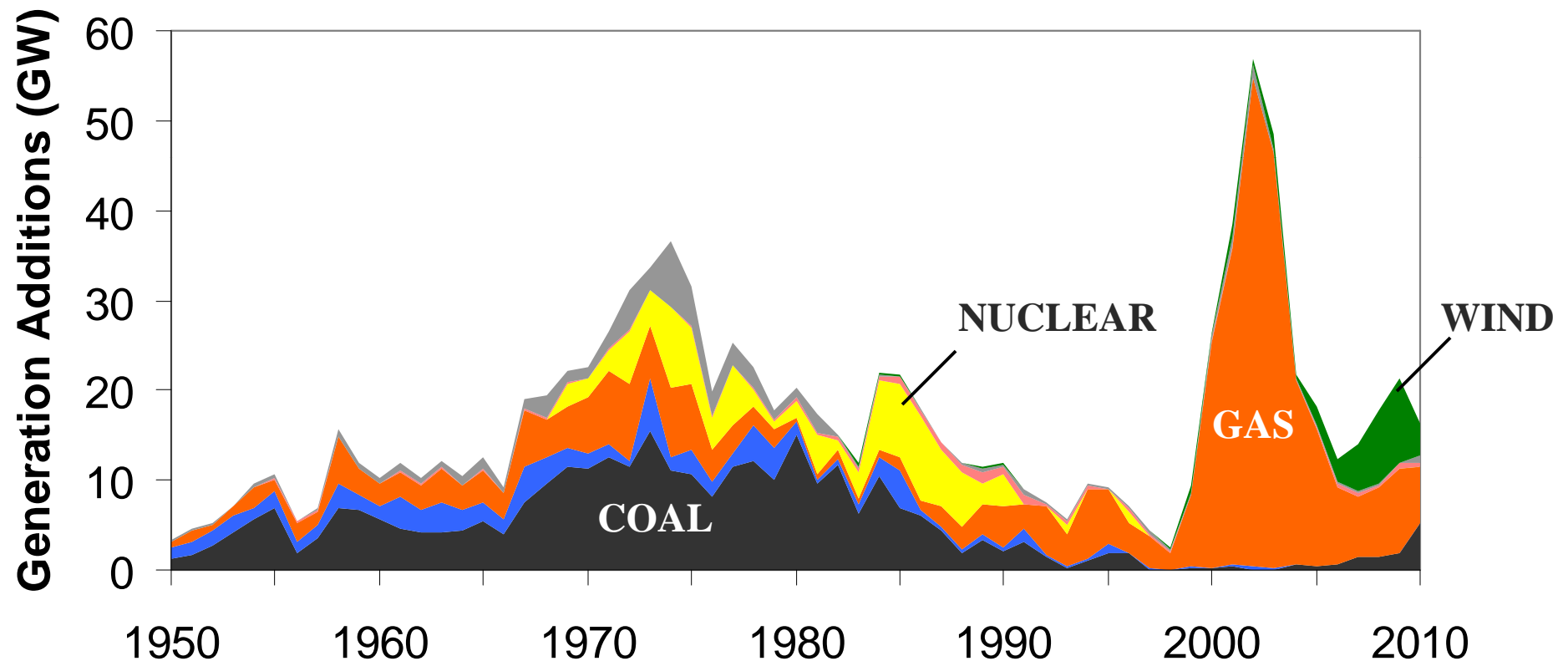
**11th EU-US Energy
Regulators Roundtable**

Boston, Massachusetts

May 13-14, 2014



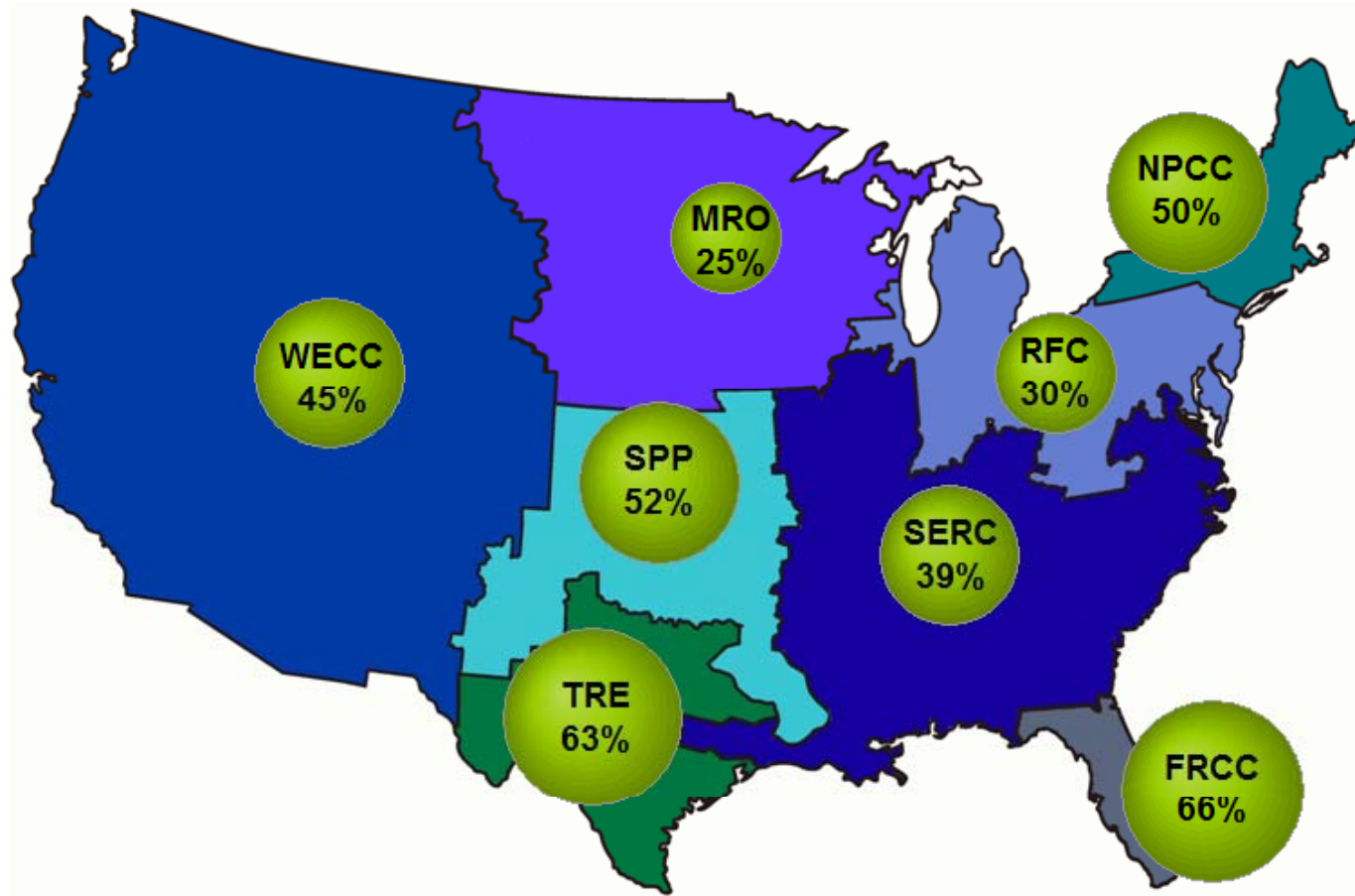
Electric Generation Added by Year



Source: Energy Information Administration
Form 860-Annual Electric Generator Report



An Increasing Reliance on Gas-Fired Generation



Gas-fired generation capacity as a percentage of total installed capacity, by NERC region

Sources: NERC Reliability Region Map and *Velocity Suite* Generation Data



Major Transmission Line Rules

- Order No. 888 in 1996
 - Requires open access to transmission facilities to address undue discrimination and to bring more efficient, lower cost power to the Nation's electricity consumers
- Order No. 890 in 2007
 - Requires coordinated, open and transparent regional transmission planning processes to address undue discrimination
- Order No. 1000 in 2011
 - Requires transmission planning at the regional level to consider and evaluate possible transmission alternatives and produce a regional transmission plan
 - Requires the cost of transmission solutions chosen to meet regional transmission needs to be allocated fairly to beneficiaries



- Planning Requirements
- Cost Allocation Requirements
- Non-incumbent Developer Reforms
- Compliance



Planning Requirements

1. Public utility transmission providers are required to participate in a regional transmission planning process that satisfies Order No. 890 principles and produces a regional transmission plan
2. Local and regional transmission planning processes must consider transmission needs driven by public policy requirements established by state or federal laws or regulations
3. Public utility transmission providers in each pair of neighboring transmission planning regions must coordinate to determine if more efficient or cost-effective solutions are available



Cost Allocation Requirements

1. Regional transmission planning process must have a regional cost allocation method for a new transmission facility selected in the regional transmission plan for purposes of cost allocation
 - Cost allocation method must satisfy six regional cost allocation principles
2. Neighboring transmission planning regions must have a common interregional cost allocation method for a new interregional transmission facility that the regions select
 - Cost allocation method must satisfy six similar interregional cost allocation principles
3. Participant-funding of new transmission facilities is permitted, but is not allowed as the regional or interregional cost allocation method



Cost Allocation Principles

- Costs allocated “roughly commensurate” with estimated benefits
- Those who do not benefit from transmission do not have to pay for it
- Benefit-to-cost thresholds must not exclude projects with significant net benefits
- No allocation of costs outside a region unless other region agrees
- Cost allocation methods and identification of beneficiaries must be transparent
- Different allocation methods could apply to different types of transmission facilities



Cost Allocation

- The rule does not require a one-size fits all method for allocating costs of transmission facilities
 - Each region is to develop its own proposed cost allocation method(s)
- If region can't decide on a cost allocation method, then FERC would decide based on the record
- No interconnection-wide cost allocation



Non-incumbent Developers

- Rule promotes competition in regional transmission planning processes to support efficient and cost effective transmission development
- Rule requires the development of a not unduly discriminatory regional process for transmission project submission, evaluation, and selection



Non-incumbent Developers

Rule removes any federal right of first refusal from Commission-approved tariffs and agreements with respect to new transmission facilities selected in a regional transmission plan for purposes of cost allocation, subject to four limitations:

- This does not apply to a transmission facility that is not selected in a regional transmission plan for purposes of cost allocation
- This does not apply to upgrades to transmission facilities, such as tower change outs or re-conductoring
- This allows, but does not require, the use of competitive bidding to solicit transmission projects or project developers
- Nothing in this requirement affects state or local laws or regulations regarding the construction of transmission facilities, including but not limited to authority over siting or permitting of transmission facilities



Status of Compliance

- The Commission has issued orders on compliance for all of the initial regional compliance filings.
- The interregional compliance filings are pending.
- Orders on rehearing and compliance have been issued for Duke-Progress, California ISO, and Northern Tier Transmission Group. The Sunshine Notice for the Commission's May 15th Open Meeting has identified action for filings relating to PJM, MISO, South Carolina Electric & Gas, and the Maine Public Service Company



Legal Challenge Pending

- Opponents of Order No. 1000 filed a legal challenge before the U.S. Court of Appeals for the D.C. Circuit focusing on several issues including the need for the rule.
- On March 20, 2014, the court held an oral argument and we are currently awaiting the court's ruling.
- Based on the arguments, the Commission expects a largely favorable outcome when a decision is issued, perhaps as early as this summer.



Session III: Resilience and Reliability





Resource Adequacy and Environmental Air Regulations

- The electric system is undergoing its most fundamental transformation ever, with a significant amount of coal generation being retired in a short time frame.
- Non-retrofitted plants subject to the Mercury and Air Toxics Rule must be closed by April 2015.
- Plants undergoing retrofits must be compliant by April 2016





EIA and NERC Data Comparison

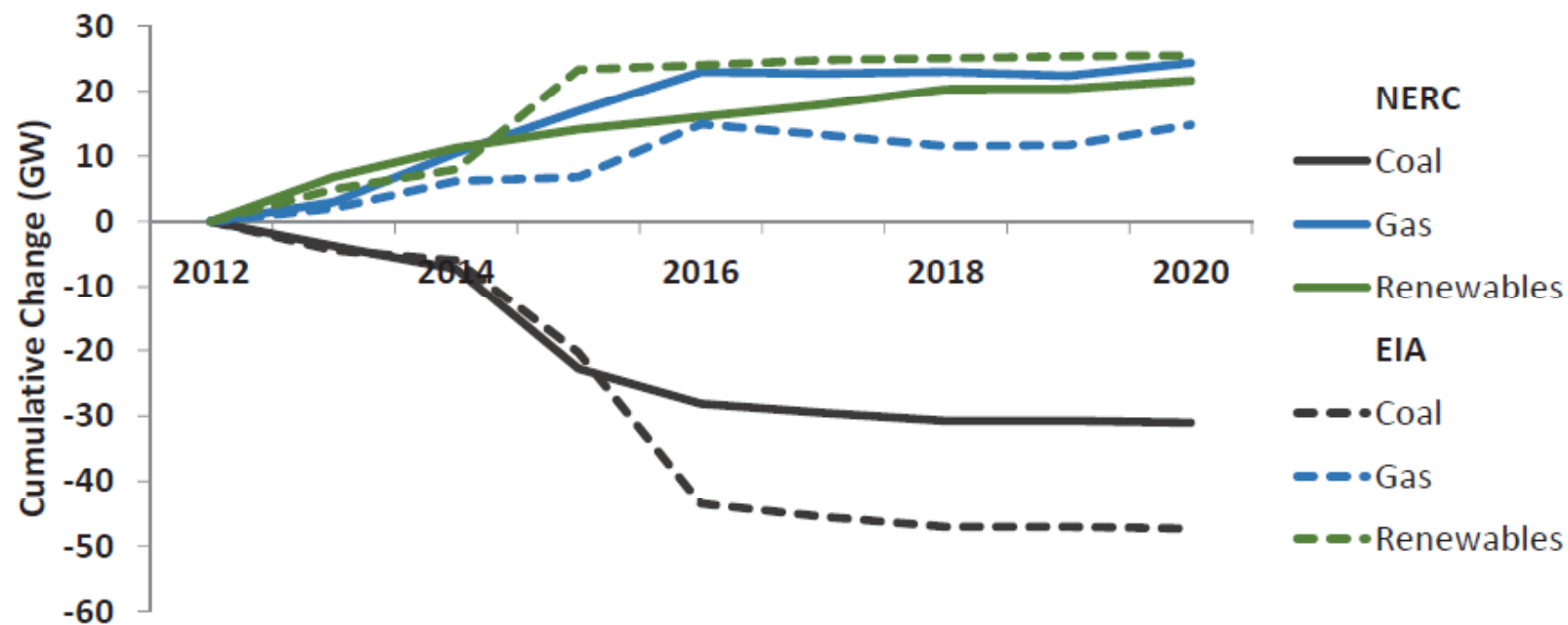


Table Values in MW	2012	2013	2014	2015	2016	2017	2018	2019	2020
NERC									
Coal	0	-3,775	-7,289	-22,784	-28,146	-29,530	-30,753	-30,730	-31,030
Gas	0	2,921	10,436	16,932	22,933	22,702	22,957	22,369	24,370
Renewables	0	6,756	11,246	14,079	16,005	17,915	20,286	20,369	21,621
EIA									
Coal	0	-4,418	-5,953	-20,311	-43,516	-45,563	-47,110	-47,110	-47,385
Gas	0	2,002	6,152	6,777	14,874	13,206	11,496	11,636	14,757
Renewables	0	4,905	7,950	23,326	24,007	24,781	25,070	25,346	25,509



Resource Adequacy and Environmental Air Regulations

- A fifth year of compliance (until April 2017) is available but subjects the plant owners to civil litigation
- Additional rules including cooling water intake, coal ash disposal, and the impending rule on carbon emissions are likely to add uncertainty for the future of some plants
- Certain markets are being hit harder than others, including PJM and MISO





Physical Security Threats





- **Physical Security Reliability Standard (CIP-014-1)**
- The Commission required NERC to develop a physical security standard, *Reliability Standards for Physical Security Measures*, 146 FERC ¶ 61,166 (2014).
- The Commission's order laid out three core requirements:
 - (1) the standard should require owners or operators of the Bulk-Power System to perform a risk assessment to identify their "critical facilities." These are facilities that, if rendered inoperable or damaged, cascading outages could occur.
 - (2) the owners or operators of the critical facilities should evaluate the potential threats and vulnerabilities to those facilities.



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(3) the owners or operators should develop and implement a security plan to protect against attacks to those critical facilities.

- The Order set a 90-day deadline – until June 5, 2014 – for NERC to submit the security standard.
- A NERC Standard Drafting Team has developed a draft standard that applies to transmission owners and operators.
- NERC stakeholders have approved the draft standard. NERC's Board of Trustees is expected to vote on the draft standard this week.



Cybersecurity Threats and CIP Version 5 Standards

- In Order No. 791 (November 2013), the Commission approved the CIP Version 5 Standards and also directed NERC to make four modifications.
- CIP Version 5 categorized Cyber Systems based on their Low, Medium, or High Impact on the reliable operation of the bulk electric system. All Cyber Systems are categorized as at least Low Impact.



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- The modifications required by the Commission are to: (1) remove or modify the “identify, assess, and correct” language, as too ambiguous; (2) specify security objectives or controls for Low Impact assets; (3) protect against harm from transient electronic devices (e.g., thumb drives and laptops); (4) define “communication networks” and develop requirements that protect communication networks.
- FERC instructed NERC to complete items (1) & (4) within a year but did not set a deadline for items (2) & (3).
- A NERC Standard Drafting Team is working on all four items concurrently. NERC expects to post the draft standards for the first 45-day ballot and commenting period in June.



The accompanying remarks are solely those of Commissioner Philip D. Moeller and may not represent the official position of the FERC.