

# Utah Clean Power Plan Stakeholder Process

Utah Division of Air Quality

February 2, 2016



# Background and Utah Response

# EPA August 3 Announcements

- Final rule for new, modified, and reconstructed electric generating units (EGUs): *Carbon Pollution Standards (CPS) for New, Modified, and Reconstructed Power Plants*, citing authority under Section 111(b)
- Final rule for existing EGUs: *Clean Power Plan (CPP)*, citing authority under Section 111(d)
- Proposed federal plan and model trading rules for the CPP
  - The federal plan will become the default for states that fail to submit a plan
- All three published in the Federal Register on October 23

# Section 111: Standards of Performance for New Stationary Sources

- 111(b): Allows EPA to establish Federal standards of performance for *new, modified, and reconstructed* sources
- 111(d): Allows EPA to develop regulations under which each state shall submit a plan establishing standards of performance for *existing* sources and providing for the implementation and enforcement of such standards of performance

# Utah Response to the CPP

- Parallel approach:
  - Legal challenge (Utah Attorney General)
  - Plan development (Utah DEQ)
    - Near-term goal: requesting a two-year extension via an initial submittal to EPA by September 6, 2016
    - Long-term goal: developing a plan for consideration by the Utah Air Quality Board in the event that legal challenges are unsuccessful
      - Final submittal due to EPA by September 6, 2018

# CPP Legal Challenge - Status

- The Utah Attorney General's Office is challenging the CPP in court
  - Utah joined West Virginia and 25 other states in challenging
  - Utah also joined request for stay
- U.S. Court of Appeals for the District of Columbia January 21:
  - Denied the stay request
    - Stay appealed to the Supreme Court
  - Ordered participants to submit:
    - A proposed format for briefing on January 27
    - A proposed schedule that ensures initial briefs are filed by April 15 and finalized by April 22
  - Granted an expedited briefing, with oral argument scheduled for June 2
  - Decision possible by the end of 2016
    - Will almost certainly be appealed

# Presentation Outline

- Carbon Pollution Standards
- Clean Power Plan
  - Affected units
  - Best system of emission reduction (BSER)
  - Application of BSER
  - State goals
- State Plan
  - Compliance
  - Development and Submittal
  - Deadlines
  - Initial Submittal
- Federal Plan and Model Trading Rules
- Utah Process Timeline
- Questions

# Carbon Pollution Standards (CPS)

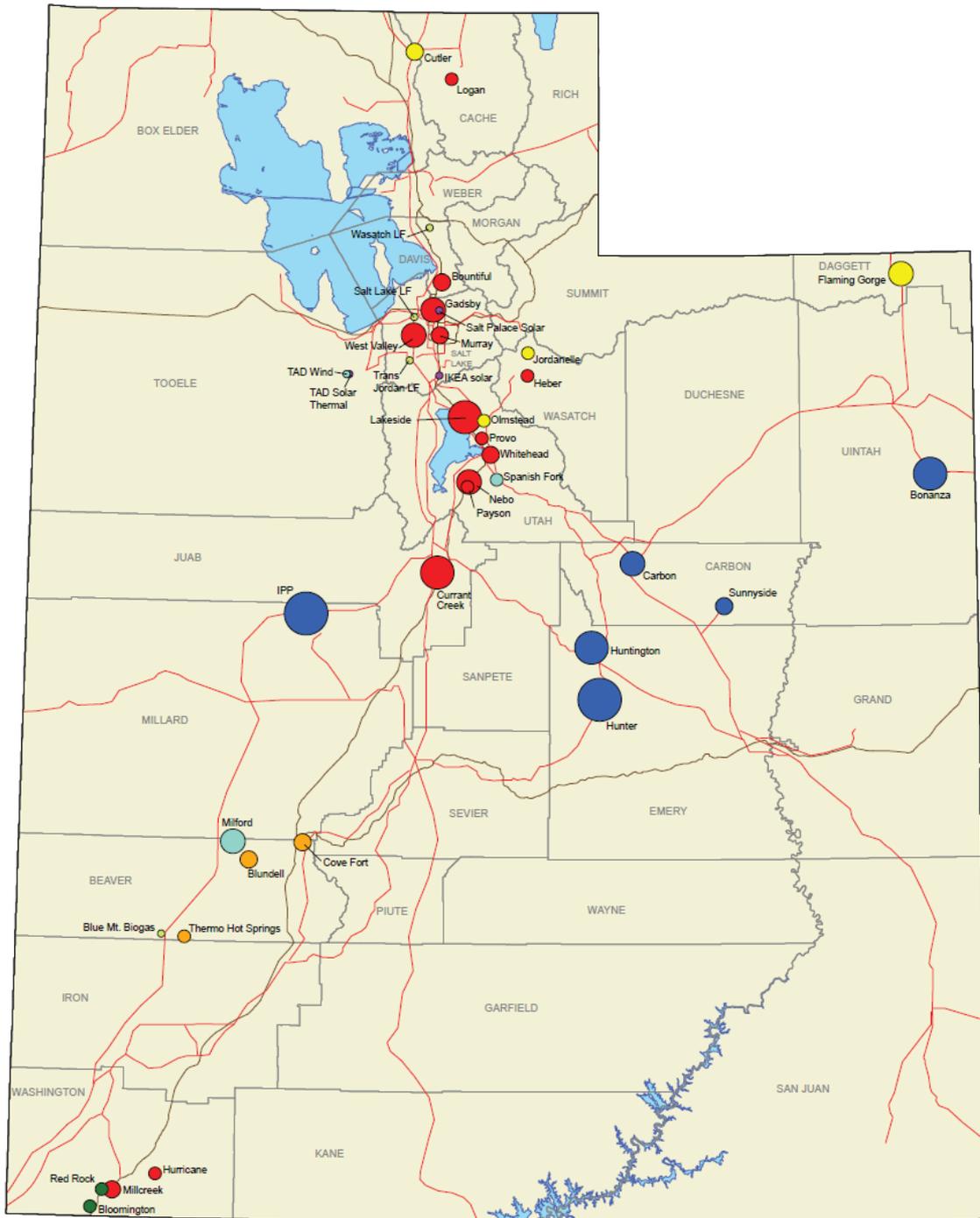
# Carbon Pollution Standards for New, Modified, and Reconstructed EGUs

- New coal units: 1,400 lbs CO<sub>2</sub>/MWh
  - Proposal was 1,100 lbs CO<sub>2</sub>/MWh
  - 2012 Utah Coal: 2078 lbs CO<sub>2</sub>/MWh
- New natural gas units: 1,000 lbs CO<sub>2</sub>/MWh
  - 2012 Utah NGCC: 884 lbs CO<sub>2</sub>/MWh

# Clean Power Plan (CPP)

# Clean Power Plan – Affected Units

- Covers 11 power plants in Utah:
  - 1 coal plant (Bonanza) under federal jurisdiction
  - 5 coal plants under state jurisdiction:
    - Carbon (retired)
    - Hunter
    - Huntington
    - Intermountain Power Plant
    - Sunnyside
  - 5 natural gas plants under state jurisdiction
    - Carrant Creek
    - Lake Side 1
    - Lake Side 2
    - Nebo
    - Gadsby (steam units 1, 2, and 3)



### Electricity

Utility plant >10 MW  
>1 MW for wind, solar, & biomass

- Coal
- Natural gas
- Petroleum
- Hydroelectric
- Geothermal
- Biomass
- Wind
- Solar

○ <10 MW  
○ 10-25 MW  
○ 25-100 MW  
○ 100-500 MW  
○ 500-1000 MW  
○ >1000 MW

— Transmission (>138 KV)  
— County boundary  
— Interstate highway

Data Source: UGS, EIA

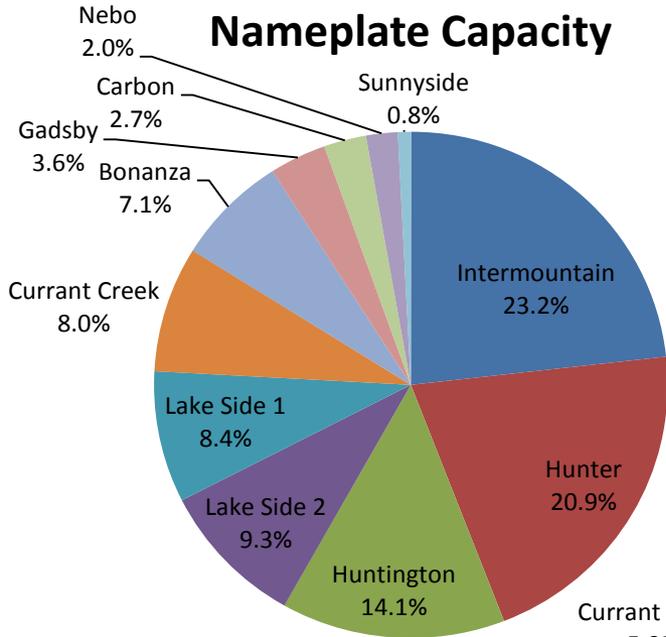
0 20 40  
miles

# Clean Power Plan – Affected Units (2012)

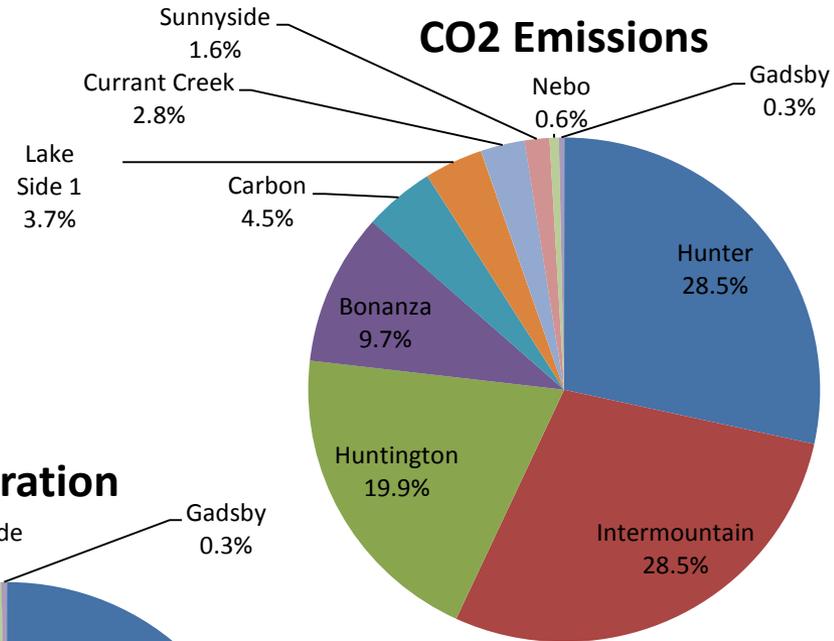
Plant Name	Operator	Generator ID	Fuel type	Prime mover type	Nameplate Capacity (MW)	Electric Generation (MWh)	Carbon Dioxide Emissions (tons)	Commenced Operations
Bonanza	Deseret Generation	1	BIT	ST	499.5	3,090,433	3,314,097	1986
Carbon	PacifiCorp	1	BIT	ST	75	517,291	634,227	1954
Carbon	PacifiCorp	2	BIT	ST	113.6	769,949	899,249	1957
Currant Creek	PacifiCorp	CT1A	NG	CC	146.2	549,964	244,720	2005
Currant Creek	PacifiCorp	CT1B	NG	CC	146.2	549,964	244,720	2005
Currant Creek	PacifiCorp	ST1	NG	CC	274.5	1,032,594	459,478	2006
Gadsby	PacifiCorp	1	NG	ST	69	14,262	17,930	1951
Gadsby	PacifiCorp	2	NG	ST	69	29,939	30,504	1952
Gadsby	PacifiCorp	3	NG	ST	113.6	76,147	63,909	1955
Hunter	PacifiCorp	1	BIT	ST	488.3	3,126,681	3,205,712	1978
Hunter	PacifiCorp	2	BIT	ST	488.3	3,142,596	3,399,161	1980
Hunter	PacifiCorp	3	BIT	ST	495.6	2,849,599	3,110,966	1983
Huntington	PacifiCorp	1	BIT	ST	498	3,356,320	3,294,326	1977
Huntington	PacifiCorp	2	BIT	ST	498	3,387,840	3,507,529	1974
Intermountain Power Project	IPSC	1	BIT	ST	820	3,695,099	3,654,267	1986
Intermountain Power Project	IPSC	2	BIT	ST	820	6,068,530	6,059,436	1987
Lake Side 1	PacifiCorp	CT01	NG	CC	182.7	893,243	389,196	2007
Lake Side 1	PacifiCorp	CT02	NG	CC	182.7	893,243	389,196	2007
Lake Side 1	PacifiCorp	ST01	NG	CC	225.9	1,104,453	481,223	2007
Lake Side 2	PacifiCorp	CT21	NG	CC	185.4	-	-	2014
Lake Side 2	PacifiCorp	CT22	NG	CC	185.4	-	-	2014
Lake Side 2	PacifiCorp	ST2	NG	CC	284.4	-	-	2014
Nebo Power Station	UAMPS	GT1	NG	CC	65	196,811	93,102	2004
Nebo Power Station	UAMPS	ST1	NG	CC	75	227,090	107,425	2004
Sunnyside Cogen	Sunnyside Cogen Associates	GEN1	WC	ST	58.1	418,235	536,066	1993

# 2012 Utah Plant Rank by Nameplate Capacity, Generation, and CO2 Emissions

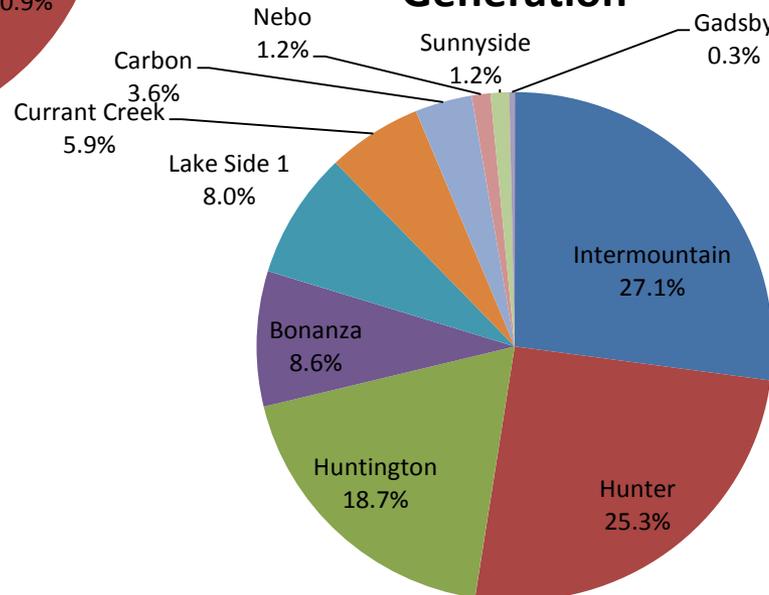
## Nameplate Capacity



## CO2 Emissions



## Generation

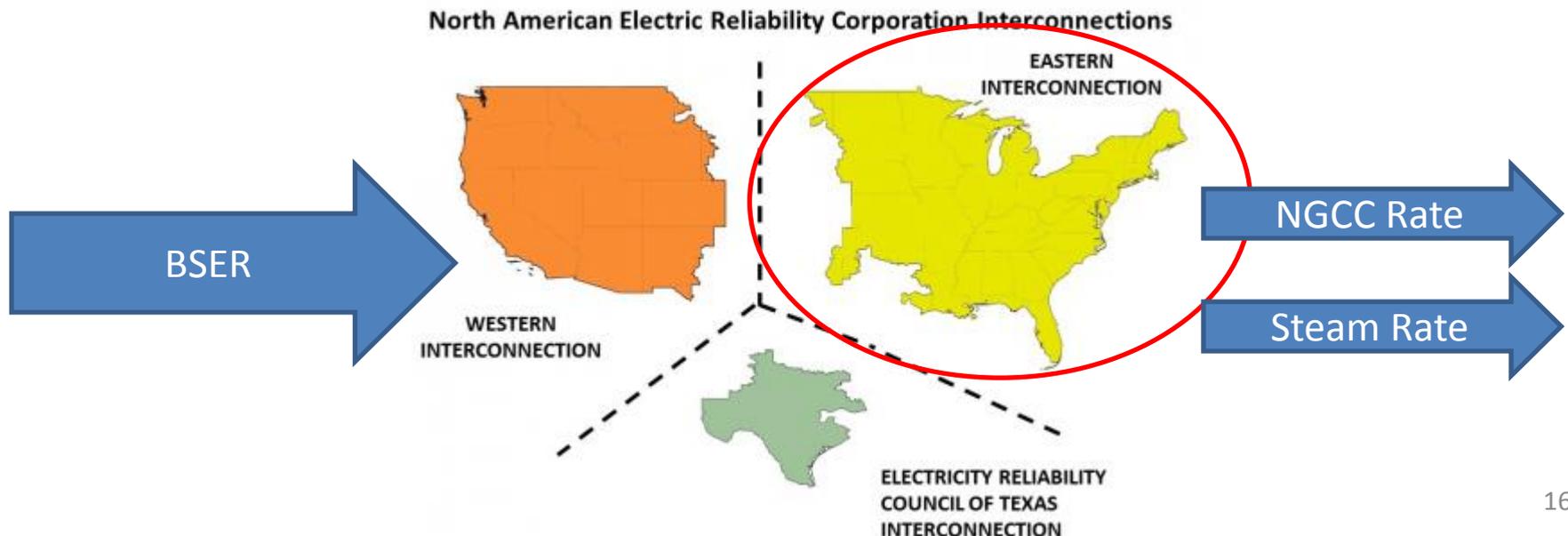


# Clean Power Plan – Best System of Emission Reduction

- Section 111 defines a standard of performance as “a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the *best system of emission reduction (BSER)* which... has been adequately demonstrated”
- For the CPP, EPA established rates based on the following BSER building blocks:
  - Block 1: Improved efficiency at *existing* coal-fired power plants
  - Block 2: Shifting generation from coal to *existing* lower-emitting natural gas plants
  - Block 3: Shifting to *new* zero-emitting renewables (e.g., solar, wind)

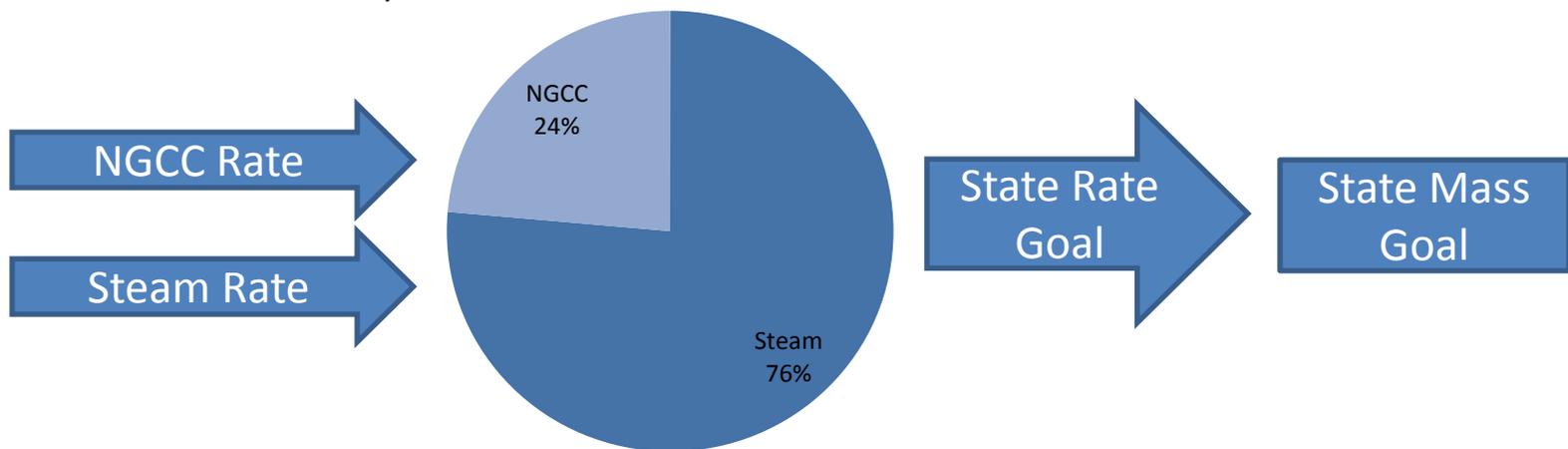
# Clean Power Plan – Application of BSER

- Applied BSER to each grid region to establish emission performance rates for two source categories
- Picked the least stringent regional rates and applied to the entire country:
  - Steam rate of 1,305 lbs CO<sub>2</sub>/MWh
  - NGCC rate of 771 lbs CO<sub>2</sub>/MWh



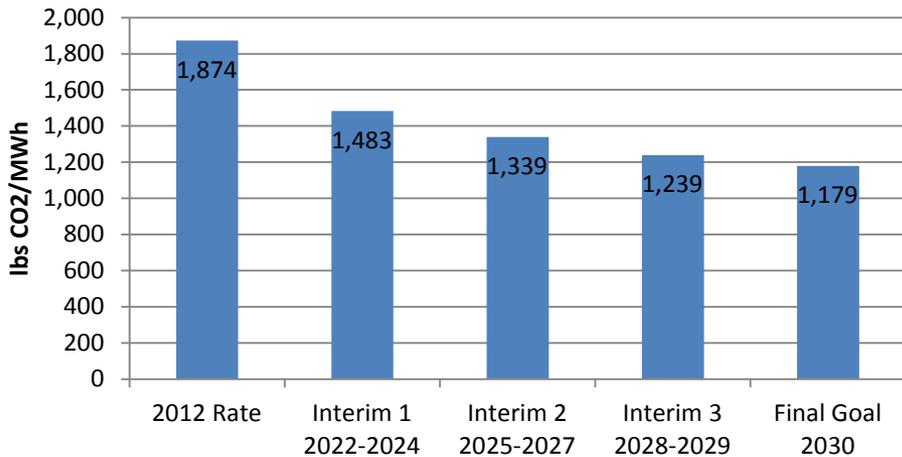
# Clean Power Plan – State Goals

- Category specific emission performance rates then used to calculate separate CO<sub>2</sub> emissions rate- and mass-based targets for each state
  - Rate:
    - Utah’s 2012 rate was 1,874 lbs CO<sub>2</sub>/MWh
    - Utah’s final (2030) target is 1,179 lbs CO<sub>2</sub>/MWh (37% reduction from 2012 levels)
  - Mass:
    - Utah’s 2012 emissions were 30,822,343 short tons CO<sub>2</sub>
    - Utah’s final (2030) target is 23,778,193 short tons CO<sub>2</sub> (23% reduction from 2012 levels)

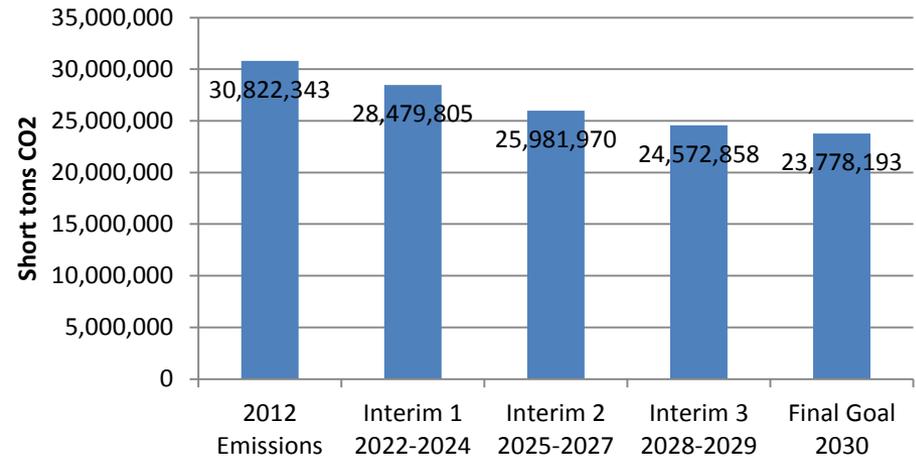


# Clean Power Plan – Utah Rate- vs. Mass-based Goals

## Rate-based

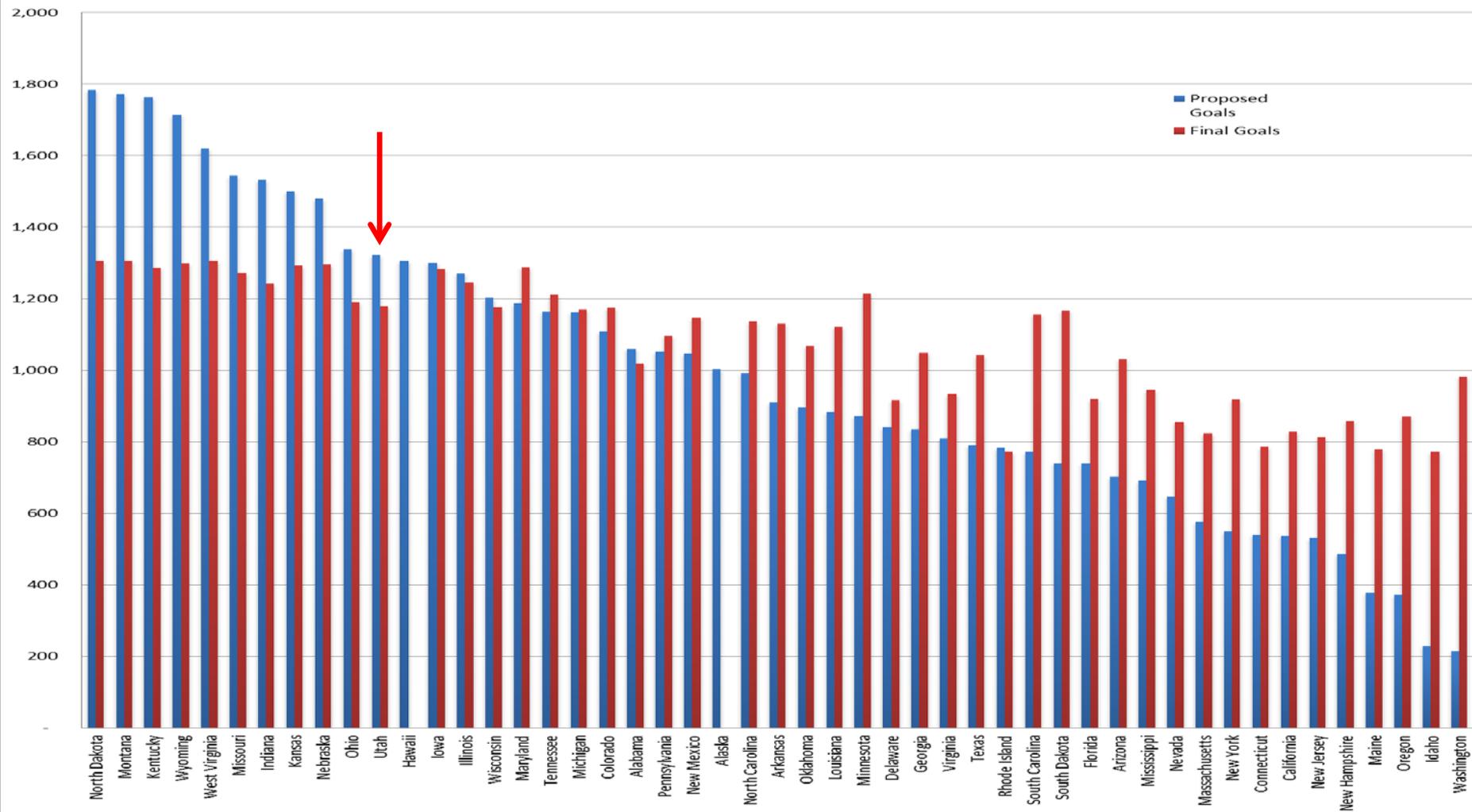


## Mass-based



# Clean Power Plan – State Goals by State (lbs CO<sub>2</sub>/MWh)

CPP State Emission Rate Targets  
(Sorted by Proposed Goal Stringency)



# State Plan

# State Plan– Compliance

- States may use BSER measures and/or other emissions reduction strategies for compliance
  - Examples:
    - Energy efficiency measures
    - Nuclear
    - Unit retirements
    - Emissions trading programs
      - Rate-based using emission rate credits (ERCs)
      - Mass-based using allowances

# State Plan – Development and Submittal

- Who develops/submits state plans?
  - CPP
    - Includes a requirement mirroring that found in 40 CFR part 51 App. V.2.1.(a) with respect to SIPs that identifies the Governor of a state as the authorized official for submitting the state plan to EPA
    - Governor can designate another responsible official via letter prior to September 6, 2016
      - This step is necessary to allow designee access to EPA's electronic plan submission system
      - If the Governor has previously delegated authority to make CAA submittals, states can submit documentation of this delegation in lieu of a letter from the Governor
  - Utah
    - Utah Code 19-2-104(1) authorizes the Utah Air Quality Board to make rules in accordance with Utah Code 63G-3, Utah Administrative Rulemaking Act
      - Board adopts rules/plans
      - Governor submits plans to EPA
      - Examples of 111(d) plans adopted by the Board
        - » Plan for Hospital, Medical, Infectious Waste Incinerators
        - » Plan for Small Municipal Waste Combustion Units

# State Plan – Deadlines

Submittals	Dates
State Plan -OR- initial submittal with 2-year extension request	September 6, 2016
Progress Update (for states w/ extensions)	September 6, 2017
State Plan (for states w/ extensions)	September 6, 2018
Milestone (Status) Report	July 1, 2021

Interim and Final Goal Periods	Reporting
Interim goal performance period (2022-2029)	
- Interim Step 1 Period (2022-2024)	July 1, 2025
- Interim Step 2 Period (2025-2027)	July 1, 2028
- Interim Step 3 Period (2028-2029)	July 1, 2030
Interim Goal (2022-2029)	July 1, 2030
Final Goal (2030)	July 1, 2032 and every 2 years beyond

# State Plan – Initial Submittal Requirements

- Three required components to obtain a 2-year extension:
  1. Identification of approaches under consideration and a description of progress made to date
    - Must include a non-binding statement of intent to participate in Clean Energy Incentive Program (CEIP)
  2. Explanation for why the state requires additional time (examples):
    - Modeling and analysis (e.g., PacifiCorp 2017 IRP)
    - Reliability assessment
    - Legal analysis
    - Stakeholder outreach
    - Development of tracking or other systems
    - Regional coordination
  3. Description of:
    - Opportunities for public comment and meaningful stakeholder engagement on *initial* submittal
    - Plans for meaningful public engagement on the *final* state plan

# State Plan – Initial Submittal Considerations

- Additional considerations:
  - The initial submittal does not require the adoption of any enforceable measures or final decisions
  - The initial submittal does not require legislation and/or regulations to be passed
  - Initial submittal does not change the compliance period (2022-2030)
  - Allows stakeholders to engage over the plan development period
  - Failure to submit an initial plan will trigger a federal plan

# Federal Plan and Model Trading Rules

# Proposed Federal Plan – Actions

- Four proposed actions:
  - Rate-based federal plan
  - Mass-based federal plan
  - Rate-based model trading rule for potential use by any state
  - Mass-based model trading rule for potential use by any state
- Comment period closed January 21

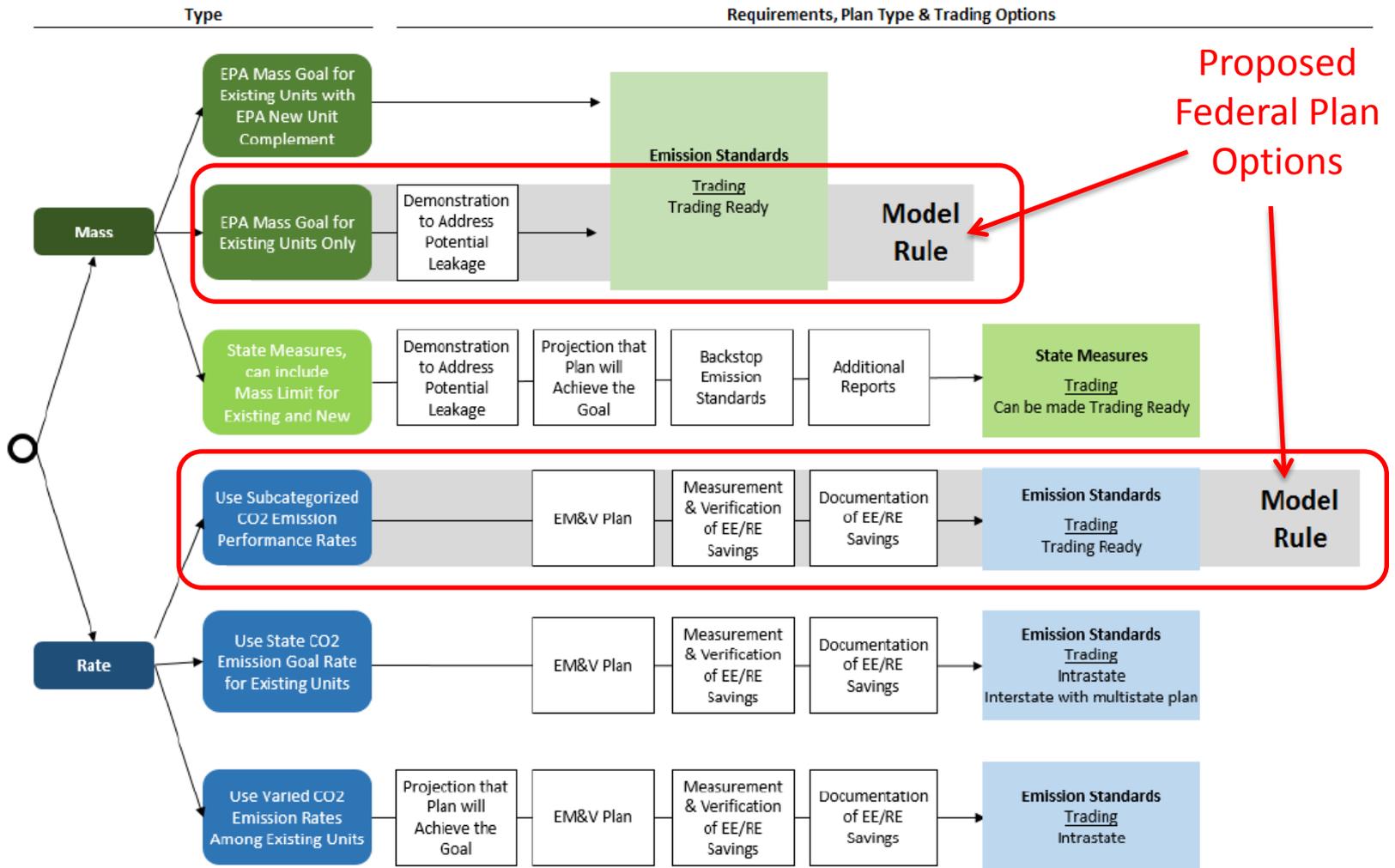
# Proposed Federal Plan – Uncertainty

- Model trading rules to be finalized by summer 2016
- EPA won't finalize federal plans until there's a need (i.e., for states that don't submit an approvable plan by the required deadline)
  - If a state does not submit an initial submittal by Sept. 6, 2016, EPA will notify that state within 90 days that the agency cannot grant a 2-year extension request
  - This constitutes a failure to submit a plan and gives EPA one year to promulgate a federal plan
- EPA intends to only finalize a single plan approach (i.e., either rate-based or mass-based)
  - States won't know which approach will be utilized until the first failure to submit an approvable plan

# Proposed Federal Plan – Less Flexibility

- The proposed federal plan approaches offer less flexibility than is available under a state plan
  - The proposed mass-based federal plan:
    - Is limited to one of three compliance sub-pathways available under a state plan
    - Includes allowance set-asides that impede state control over allowance distribution and reduce the total number of allowances directly available to plant operators for compliance
    - Re-allocates allowances from retired units to renewable energy set-aside: pros and cons
  - The proposed rate-based federal plan
    - Is limited to one of three compliance sub-pathways available under a state plan
      - Requires EGUs to meet subcategorized emissions performance rates
    - May not included energy efficiency for ERC issuance
    - Impedes state control over other key aspects of program implementation

# Compliance Pathways



# Utah Process Timeline

- March 1: Stakeholder Meeting 2
  - CPP perspectives panel (TBA)
  - Overview of potential compliance pathways
  - Overview of Clean Energy Incentive Program (CEIP)
- April 5: Stakeholder Meeting 3
  - Preliminary staff report on compliance pathways
  - Preliminary list of required resources (examples):
    - Modeling and analysis (e.g., PacifiCorp 2017 IRP)
    - Reliability assessment
    - Legal analysis
    - Stakeholder outreach
    - Development of tracking or other systems
    - Regional coordination
- May 3: Stakeholder Meeting 4
  - Compliance pathway refinement
  - Refined list of required resources
- Mid-May: Legislative update to Public Utilities Interim Committee
- June 1:
  - Initial submittal draft completed for public comment
- July-August: Stakeholder meetings as needed
  - Staff revisions to initial submittal based on comments
- September 6: Initial submittal to EPA

# Questions?



Glade Sowards  
Clean Power Plan Coordinator  
Utah Division of Air Quality  
801-536-4020  
gladesowards@utah.gov

For more information, please visit:  
<http://airquality.utah.gov/sections/planning/utah-clean-power-plan.htm>