

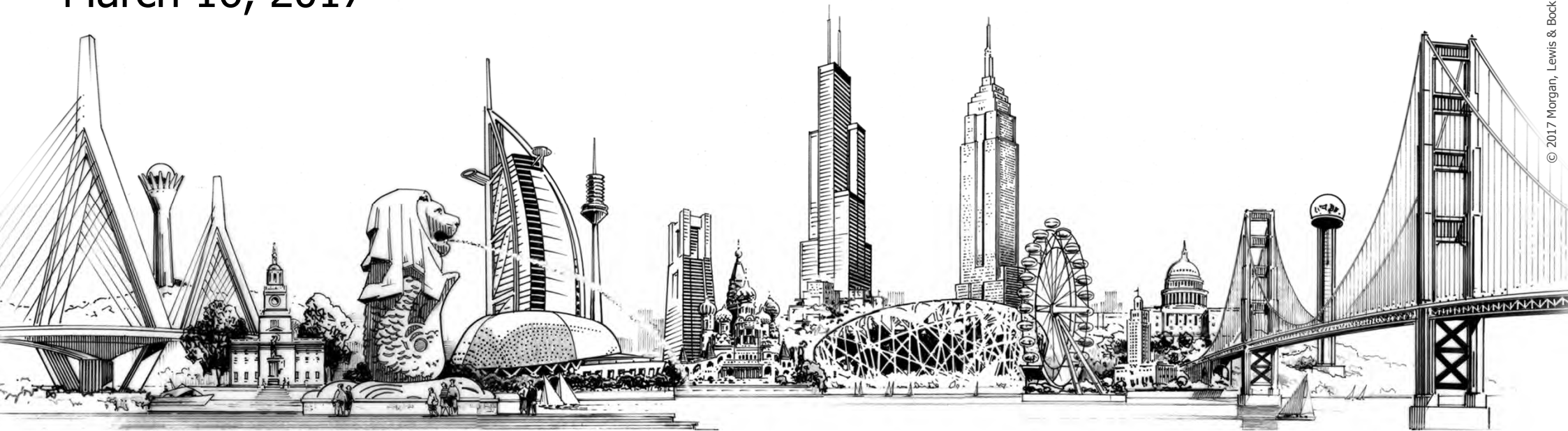
**Morgan Lewis**

# **FEDERAL RULES REGARDING TRANSMISSION PLANNING AND COST ALLOCATION**

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LSI Seminar on Electric Utility Rate Cases

March 16, 2017



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# I. BACKGROUND

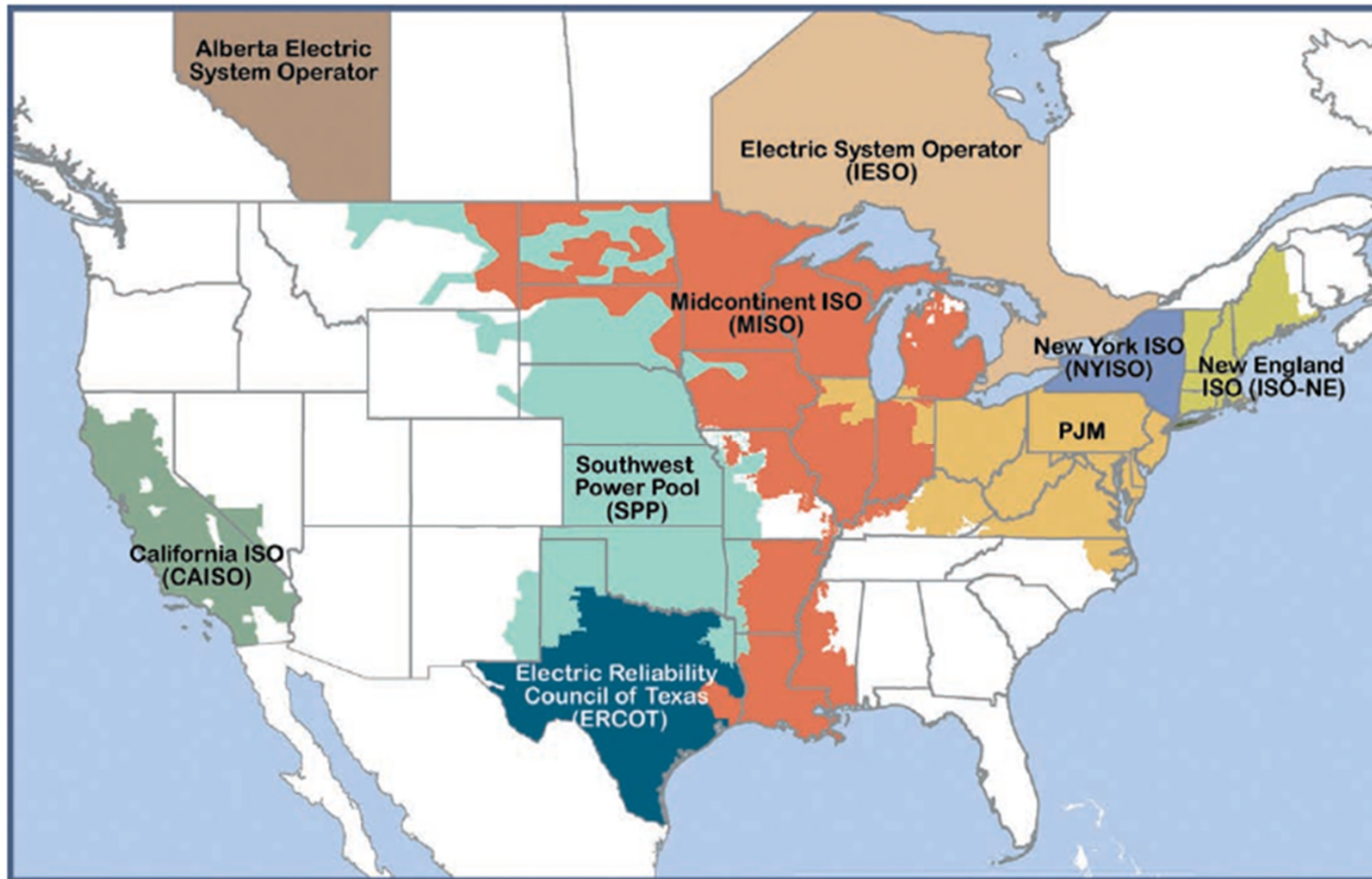
# Basics of FERC Regulation of Transmission

- Under the Federal Power Act (“FPA”) FERC has jurisdiction over “*public utilities*,” but this term is defined in a way that does not include *publicly-owned utilities* such as municipal utilities, cooperatives, or federal agencies
- With respect to transmission, FERC has exclusive authority over rates
  - FERC sets rates in a transmission rate case
  - When states set retail rates, they must reflect FERC transmission rates
- FERC sets terms of service
  - In Orders 888, 889 (1996), required open access
  - In Order 890 (2007), began to require transmission planning
  - In Order 1000 (2011), significantly expanded transmission planning and cost allocation requirements

# Basics of FERC Regulation of Electricity Markets

- FERC has jurisdiction over wholesale sales of electricity in interstate commerce
- Since the issuance of Order 2000 (1999), FERC has encouraged the formation of Regional Transmission Organizations (“RTOs”) and Independent System Operators (“ISOs”) which operate regional transmission systems and run wholesale electricity markets
- In the Western interconnection, the only RTO/ISO is the California Independent System Operator
- Nationwide, about 2/3 of the nation’s electricity is sold in such electricity markets

# Current Status of Formation of RTOs and ISOs



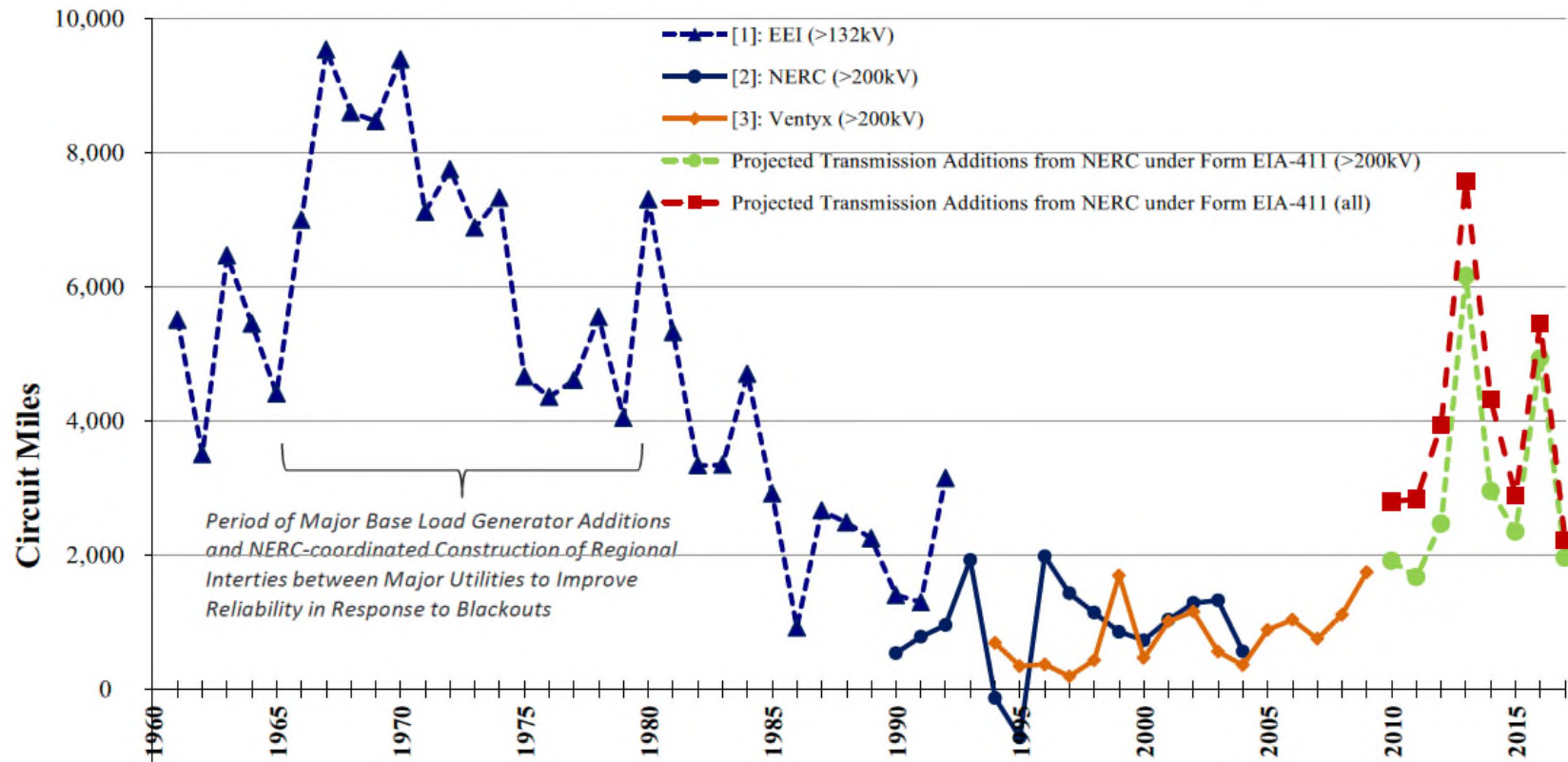
Source: FERC

Note that all ISOs and RTOs in US are under jurisdiction of FERC, except ERCOT which operates an intrastate grid.

# Need for New Investment in Transmission

## Historical Circuit-Mile Additions Document Aging Grid

- Most of the existing grid was built 30-50+ years ago
- Even relatively high recent and projected circuit miles additions are below levels of additions in 1960s and 1970s



Source: Brattle Group

# Additional Transmission Investment Needed for RPS, CPP Goals

## Estimated U.S. Transmission Investment Driven by Renewables through 2025

		Existing State RPS	EPA Estimate w/ CPP	Brattle Estimate w/ CPP
Estimated Wind Capacity	GW	50-70	90	110
<b>Regional Transmission</b>	<b>\$billion</b>	<b>20-33</b>	<b>40</b>	<b>50</b>
Interconnection related	\$billion	5-7	9	11
<b>Total Transmission</b>	<b>\$billion</b>	<b>25-40</b>	<b>50</b>	<b>60</b>

Sources and Notes:

Brattle Estimate with the CPP assumes 50% of required emission rate reduction achieved through added wind generation.

Source: Brattle Group



# **II. FERC ORDER 1000 – TRANSMISSION PLANNING AND COST ALLOCATION**

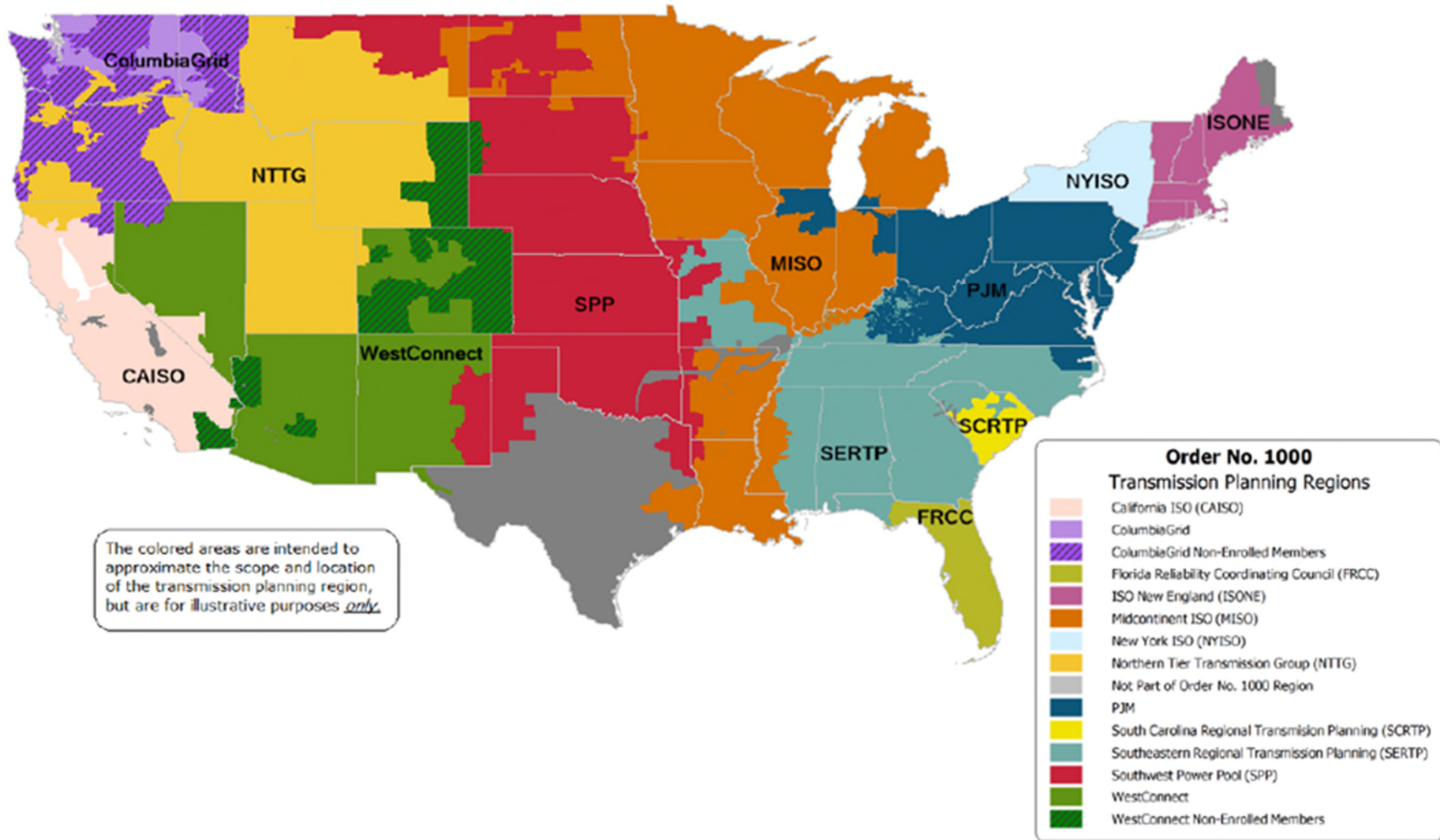
# Basics of FERC Order 1000

- Issued in 2011 on decisions on rehearing, Orders 1000A and 1000B, were issued in 2012
- Directed all public utility transmission providers to:
  - Develop a **regional transmission planning process** which considers transmission needs driven by federal, state, and local **public policy mandates**
  - Establish new **cost allocation** methods for regional and interregional transmission facilities that result from the Order 1000 processes, based on six cost allocation principles.
  - Remove from their FERC-jurisdictional tariffs any “**federal right of first refusal**” (“federal ROFR”) to an incumbent public utility transmission provider to construct regional transmission facilities
  - Participate in broader **interregional transmission coordination**
- Deadlines: Regional plans, 2012; interregional plans, 2013
- Upheld in all respects by the U.S. Court of Appeals for the D.C. Circuit in 2014

# Cost Allocation

- FERC set **principles** for cost allocation:
  1. Costs allocated “roughly commensurate” with estimated benefits
  2. Those who do not benefit from transmission do not have to pay for it
  3. Benefit-to-cost thresholds must not exclude projects with significant net benefits
  4. No allocation of costs outside a region unless other region agrees
  5. Cost allocation methods and identification of beneficiaries must be transparent
  6. Different allocation methods can apply to different types of transmission facilities
- FERC left it to the regions to decide what cost **methodology** to use, such as:
  - **Postage stamp:** Transmission costs are recovered uniformly from all loads in a defined market area
  - **License plate:** Each utility recovers the costs of its own transmission investments (usually located within its footprint)

# Order 1000 Transmission Planning Regions



Source: FERC

# Regional Transmission Planning Process Requirements

- Identify the “region”
- Explain how the region will identify and evaluate what it will be planning for
- Consider needs driven by public policy requirements
  - No mandate to include any specific requirement
  - How requirements are met is up to each region
- Include a regional process for transmission project submission, evaluation, and selection
- Be transparent and open to all interested market participants and provide opportunities for stakeholders to identify and evaluate regional solutions
- Produce regional plans and associated cost allocation

# Regional Cost Allocation

- Regions will need to decide how to allocate costs for different types of transmission projects (e.g., reliability, economic, public policy)
- Regions will need to decide what method to use to allocate the costs
- If a region can't decide on regional cost allocation, then FERC will decide based on record

# Interregional Plans

- “Interregional transmission facilities” are those that are located in two or more neighboring transmission planning regions
- Each pair of neighboring transmission planning regions must:
  - Share information regarding the respective needs of each region and potential solutions to those needs
  - Identify and jointly evaluate interregional transmission facilities that may be more efficient or cost-effective solutions to those regional needs
- No requirement to produce an interregional transmission plan or engage in interconnection-wide planning

# Interregional Cost Allocation

- To be eligible for interregional cost allocation, facilities must be selected in each entity's regional plans
- Regions are to specify method for interregional cost allocation
  - Methods can differ across different pairs of neighboring regions
  - Methods can differ across different types of projects
- Interregional cost allocation must also satisfy the FERC's six cost allocation principles



# Non-Incumbent Participation

- Plans must provide for **participation** by non-incumbents:
  - Criteria to determine an entity's eligibility to propose a transmission project (e.g., financial resources and technical expertise)
  - Project submission requirements
  - Project evaluation procedures
  - Same eligibility for cost allocation
- Plans cannot contain a federal **Right of First Refusal** ("ROFR"), but unclear how much effect this will have:
  - Applies only to facilities selected in regional plans for purpose of cost allocation
  - Does not apply to upgrades of existing facilities
  - Does not affect state laws and regulation, including state-level ROFR
- Allows, but does not require, competitive bidding

# Status of Implementation Nationally

- Regional Plans
  - All Regional compliance filings have been made
  - FERC has fully accepted all, except compliance filing for NYISO
  - Several cases challenging FERC orders on compliance filings have been brought, but FERC decisions have been upheld in almost all respects, except for an important part of its decision on WestConnect which is on remand to FERC
- Interregional Compliance Filings
  - FERC has fully accepted all, except some aspects of the MISO and PJM interregional plans
  - Several law suits pending against FERC

## FERC Commissioners



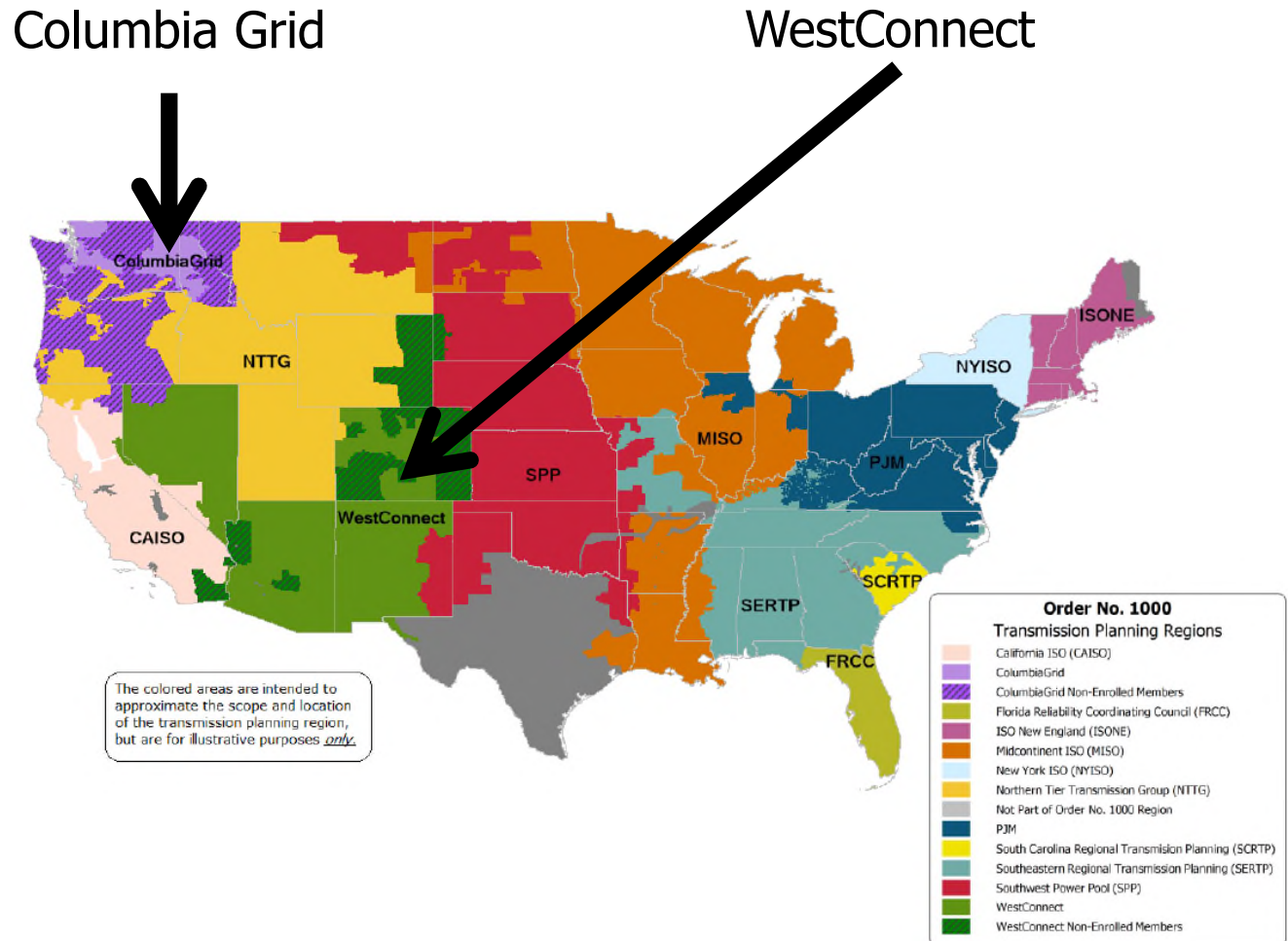
FERC Currently Lacks a Quorum –  
Only Two of Five Commissioners Confirmed

Source: FERC

# **III. IMPLEMENTATION OF ORDER 1000 IN THE WEST**

# Status of Western Regional Filings

- Order 1000 in effect in all regions in the West
- On important issue which arose in the West with regard to participation:
  - Columbia Grid – note the solid color areas served by the enrolled entities is small
  - WestConnect – note that the solid color areas served by enrolled entities is interspersed with entities that are not enrolled



Source: FERC

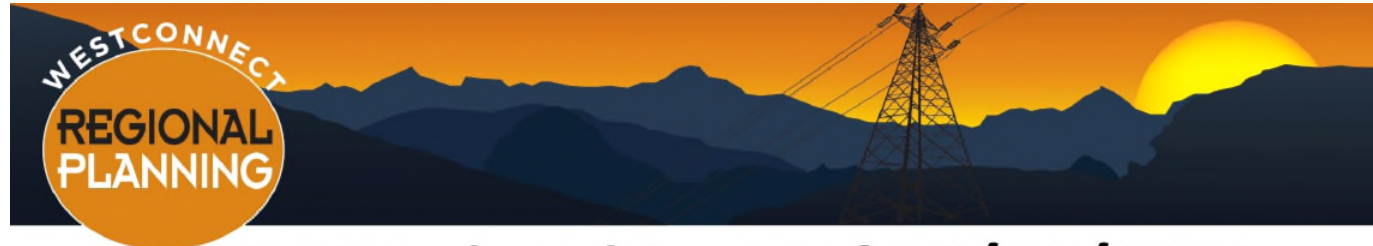
# Participation Issues in Western Regional Filings

- Relationship between regions and non-FERC jurisdictional transmission providers is important in the West
- Order 1000 and 1000-A position regarding non-jurisdictional
  - Non-jurisdictional are not required to “enroll” in a planning region, but if they do, they are subject to mandatory cost allocation
  - Although FERC has sometimes used concept of “reciprocity” to bring in non-jurisdictional, it did not do so
  - Problems
    - How can planning be done without full participation?
    - For cost allocation - if non-jurisdictional do not participate, how do you avoid free-riders?
- Columbia Grid FERC review:
  - Planning can include non-jurisdictional without enrolling them
  - BPA, as federal agency, filed own non-jurisdictional tariff separately which is similar to what would be required by Order 1000

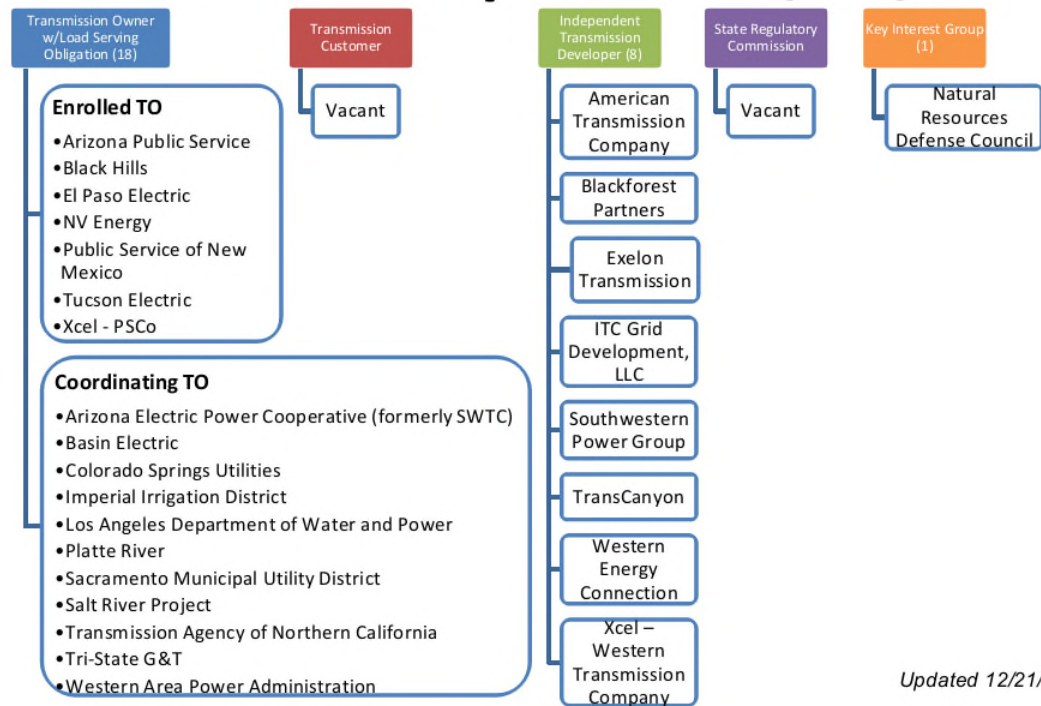
# Participation Issues in Western Regional Filings con't

- WestConnect FERC Review:
  - Problem is acute: About half of utilities non-jurisdictional
  - Went through four compliance filings before plan was approved
  - In the end, FERC approved:
    - Have Planning Participation Agreement in which non-jurisdictional can participate as “Coordinating Transmission Owners” that are not enrolled
    - Making cost allocation binding on non-jurisdictional only if they enroll
- *El Paso v. FERC*, 832 F.3d 495 (5th Cir. 2016) (2-1 decision)
  - El Paso argues that FERC approach is not just and reasonable – violates cost causation principle since jurisdictional utilities may have to pick up costs for non-jurisdictional free-riders
  - Court decides that FERC must explain why its order is just and reasonable
    - In particular, FERC should explain why it did not invoke “reciprocity,” i.e. forcing non-jurisdictional by finding they cannot use jurisdictional lines unless they operate under reciprocal rules
  - Awaiting FERC response

# Status of WestConnect Implementation



## PMC Membership as of 12/21/2016

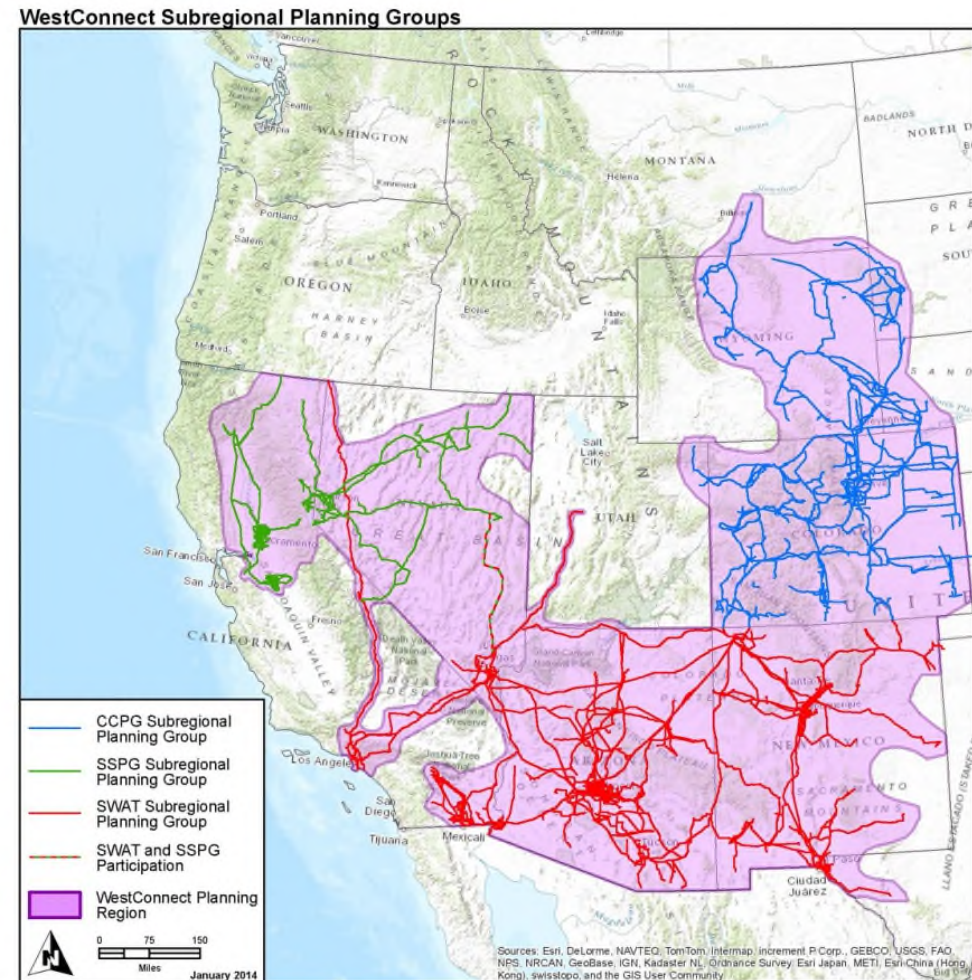


Updated 12/21/16 42

# 2016-17 WestConnect Planning

- In 2016-17, WestConnect is going through its full Order 1000 process for the first time
- Solicited interregional lines, prepared study plan, developed model, and is finalizing needs assessment report
- Draft regional needs assessment report did not identify any regional transmission needs in base case, so will not be considering new regional or interregional lines in 2017
- Did study of future transmission needs for higher RPS requirements and CPP which showed a major impact on regional congestion and inter-regional paths

## WestConnect Planning Sub-Regions



Source: WestConnect

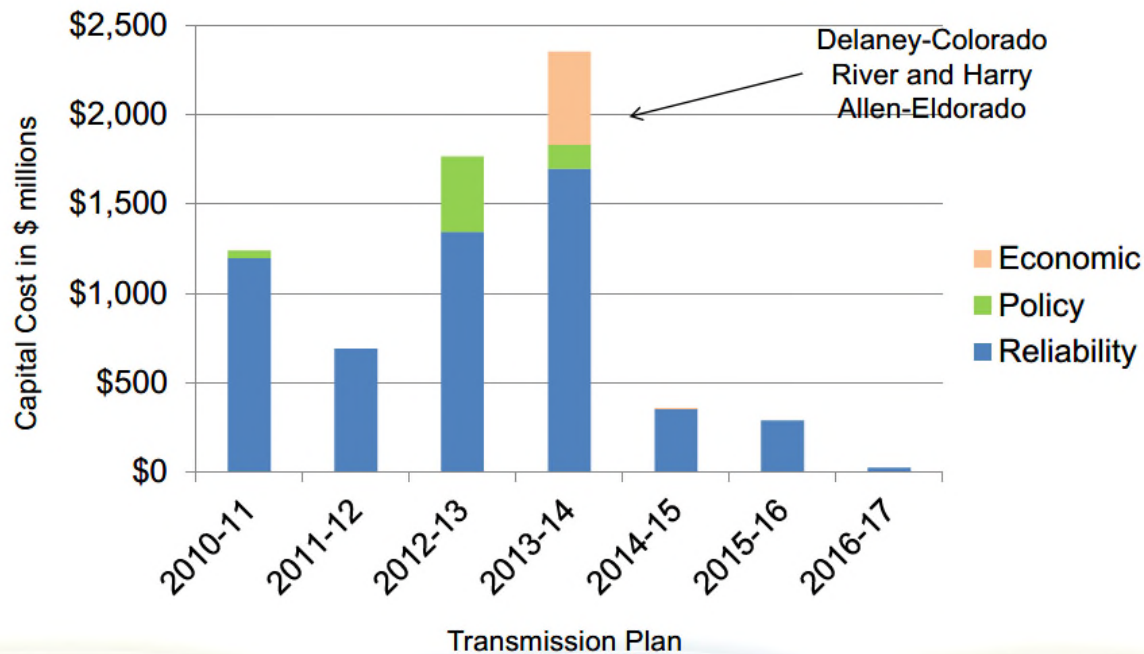


# Status of CAISO Implementation

- CAISO started reforming its transmission planning process before Order 1000 in a way which turned out to be consistent with Order 1000
  - Identifies reliability, policy-driven, and economic projects
  - All costs of >200 kV lines are paid by all users of grid through transmission access charge
- In **2012**, CAISO began implementation of a new transmission planning process
- In **2012-13**, CAISO identified a large number of new transmission projects in CA and started to use its competitive solicitation process
- In **2013-14**, CAISO identified many projects expected to cost almost \$2 billion, including two economic projects to neighboring states, for which it used its competitive solicitation process
- In **2014-15, 2015-2016, and draft 2016-17** Transmission Plans, CAISO identified no new transmission projects eligible for competitive solicitation

# CAISO Transmission Line Approvals

Transmission approvals over the last 7 years – over 30 projects a year until 2014-2015:



## Lines to AZ and NV

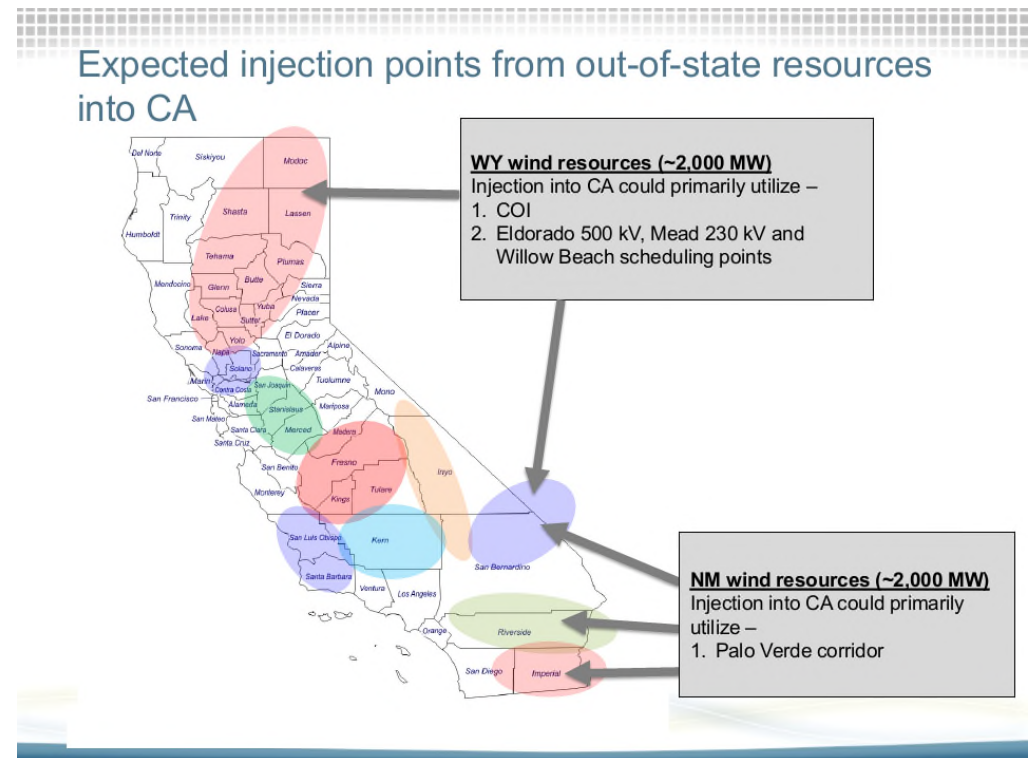
- Delaney-Colorado River – CA and AZ; Project Sponsor is DCR Transmission (Abengoa and Starwood)
  - 115-140 miles, 500 kV line, cost approximately \$300 million
- Harry Allen-Eldorado – NV; Project Sponsor is DesertLink (LS Power)
  - 60 miles, 500 kV line, cost approximately \$144 million
- All costs paid for by CAISO ratepayers

Source: CAISO

# CAISO Draft 2016-17 Transmission Plan

- CAISO Transmission Plan included a special study to evaluate scenarios for getting to the State's new RPS goal of 50% renewables by 2030
- One of the scenarios in 2016-17 plan is an out-of-state scenario
  - Assumes significant amount of generation coming into California from Wyoming and New Mexico
- In-state congestion from imports appears to be manageable, but CAISO needs to work with other planning regions to figure out impacts of on their systems – e.g. in 2017 WestConnect will run case with CA 50% RPS

## Possible Import Injection Points



Source: CAISO

# Status of Western Interregional Plan

- Western regions collaborated on common tariff language for their initial interregional filing in 2013, which was approved in 2015
- Key concepts
  - Regional processes are foundation
  - Planning procedures include:
    - Interregional planning coordination and data exchange
    - Identification and joint evaluation of Interregional Transmission Facilities (“ITFs”)(*i.e.* lines which interconnect at least two planning regions and seek interregional cost allocation)
      - Standard is whether ITFs would address regional transmission needs **more efficiently or cost-effectively** than separate regional transmission facilities
  - Cost allocation procedures for lines selected by regions for inclusion in plan for purposes of cost allocation, which requires a benefits determination and assignment of costs

# Status of Western Interregional Plan Implementation

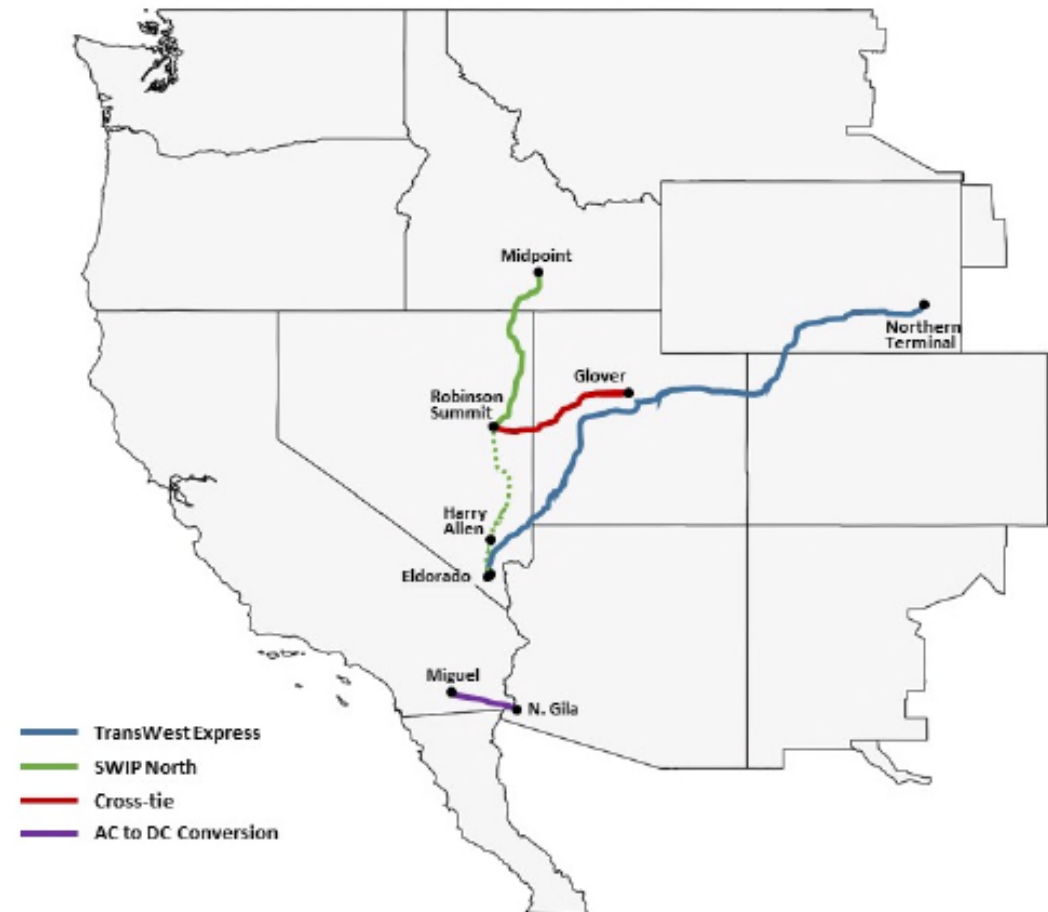
- The interregional plan submitted by the four planning regions calls for an annual meeting and one was held on February 23, 2017
- At this point, the four regional planning entities:
  - Have solicited applications for interregional lines and are gearing up to evaluate them
  - Are collaborating on developing a common methodology for studying the interregional transmission lines
  - Have enlisted support from the Western Electricity Coordinating Council (“WECC”)
    - Set up a new Reliability Assessment Committee
    - Will be developing an anchor data set
- If any regions approve new interregional lines seeking cost allocation, will be considering them

# Interregional Projects Under Review

## Relevant Planning Regions

- TransWest Express
  - California ISO
  - NTTG
  - WestConnect
- SWIP North
  - California ISO
  - NTTG
  - WestConnect
- Cross-tie Project
  - California ISO
  - NTTG
  - WestConnect
- AC/DC Conversion Project
  - California ISO
  - WestConnect

## Interregional Transmission Projects

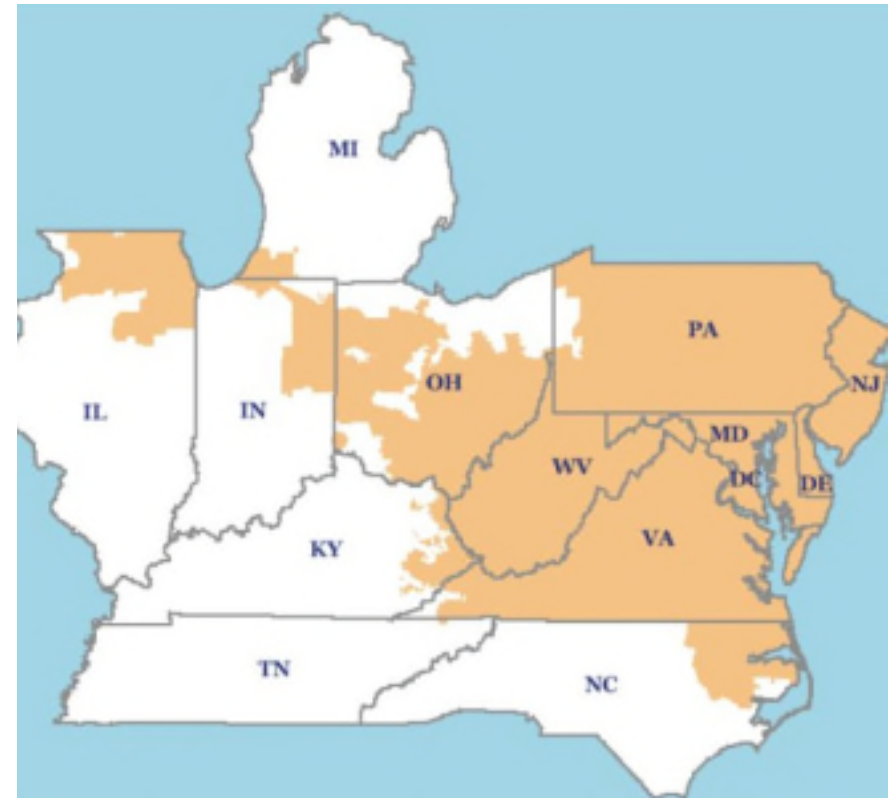


# **IV. LITIGATION RELATING TO COST ALLOCATION**

# PJM Cost Allocation and the Courts

- PJM proposed “postage stamp” cost allocation for new 500 kV or more transmission lines, and FERC approved
- Illinois Commerce Commission (“Ill. C.C.”) objected, arguing that ratepayers in remote Illinois would not benefit and should not have to pay
- In *Ill.C.C. v. FERC*, 576 F.3d 470 (7th Cir. 2009) court ruled that “costs must be roughly commensurate with benefits,” and remanded case
- On remand, FERC justified, but did not quantify, its decision to allow postage stamp cost allocation
- In *Ill.C.C. v. FERC*, 756 F.3d 556 (7th Cir. 2014), court again overturned FERC, finding quantification is necessary and remanded to FERC
- For Order 1000, PJM changed methodology to 50% postage stamp/50% based on local distribution factor

## Territory Covered by PJM



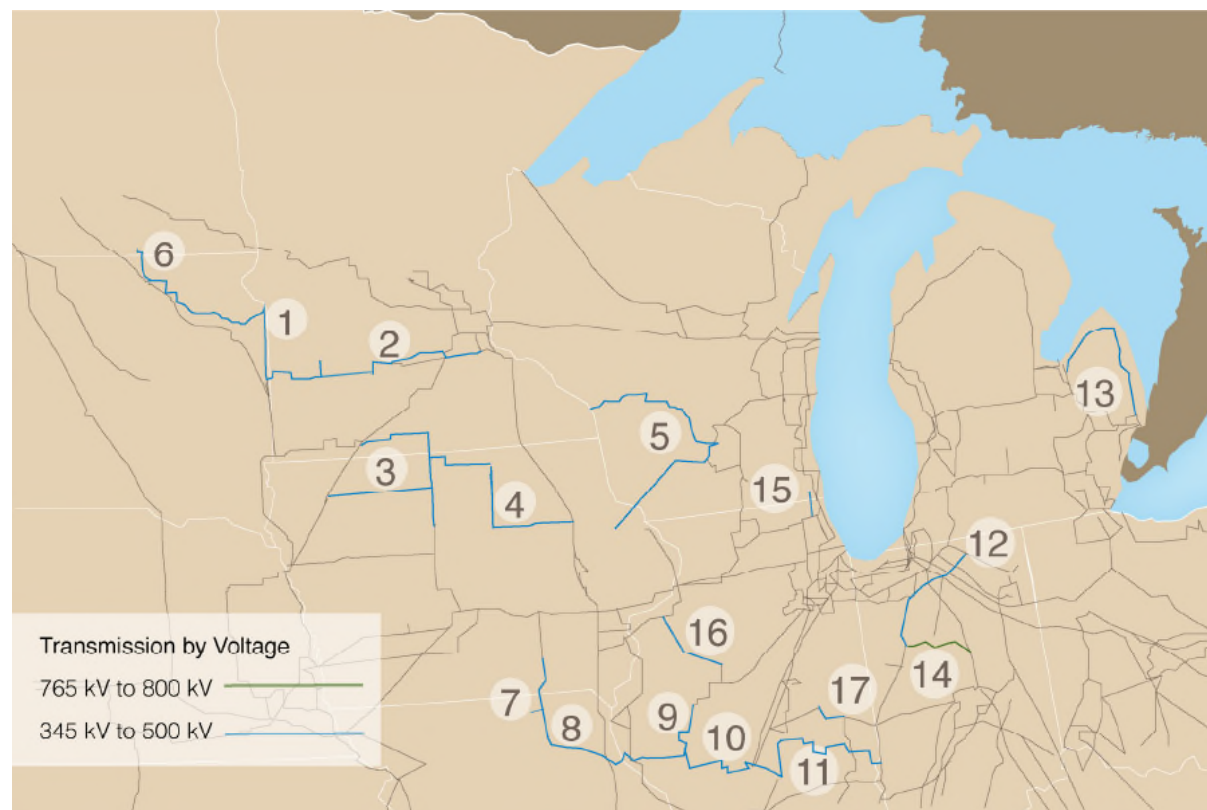
Source: PJM



# MISO Multi-Value Projects

- In 2011 MISO finished a regional planning effort which resulted in the identification of 19 Multi-Value Projects (“MVPs), 345 kV and above, initially estimated to cost \$6.7 billion
- MVPs “enable the reliable and economic delivery of energy in support of documented energy policy mandates or laws that address, through the development of a robust transmission system, multiple reliability and/or economic issues affecting multiple [MISO] transmission zones.” 156 FERC ¶ 61,034 at P 4

## Multi-Value Project Portfolio

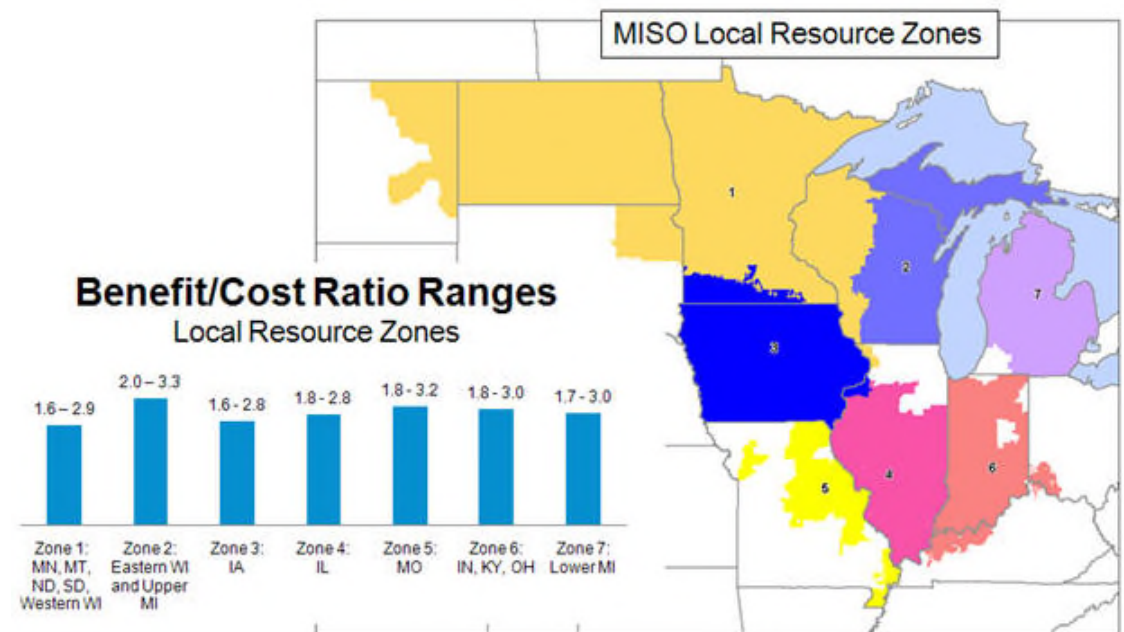


Source: MISO

# MISO Multi-Value Project Cost Allocation

- MISO did study showing all MISO regions would benefit
- MISO decided it wanted to use postage stamp cost allocation for cost of MVPs, paid on basis of load share, and to impose a fee for exports, including exports to PJM
- In 2011, FERC approved MISO use of postage stamp cost allocation, but found MISO had not adequately justified the requested fee on exports to PJM
- FERC decision was appealed to 7th Circuit

## Impact of MVPs by MISO Zone



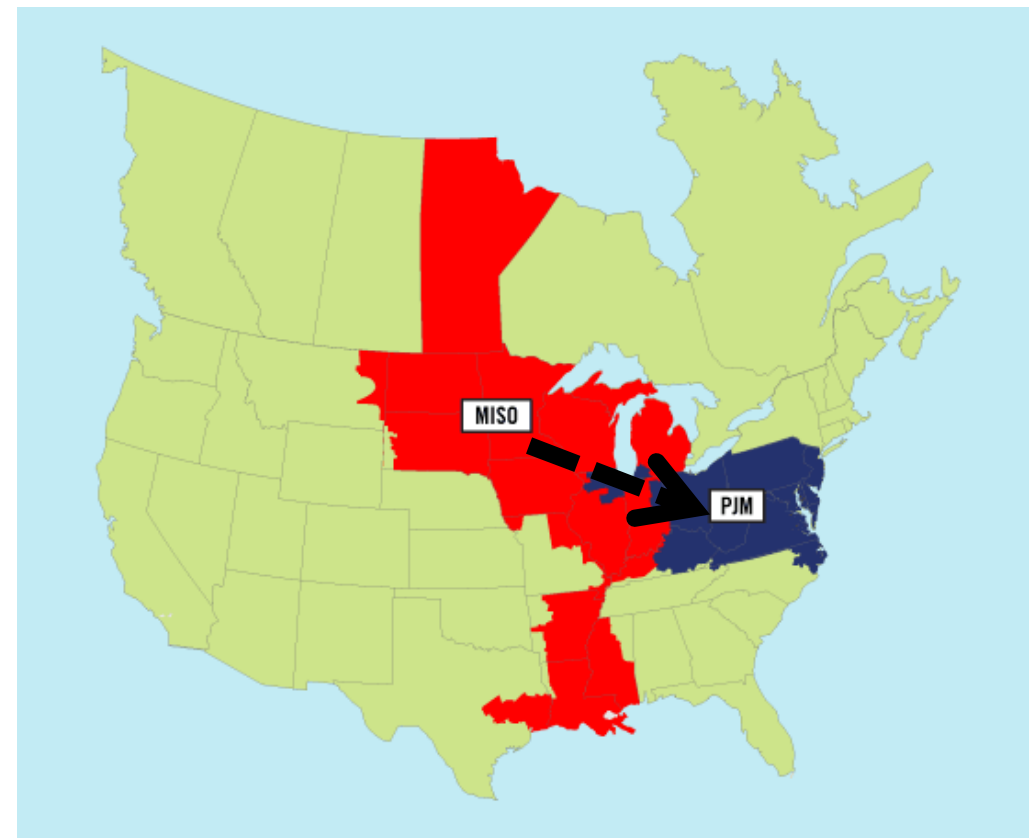
Source: MISO

# MISO Multi-Value Project Cost Allocation Con't

- In *Ill.C.C. v. FERC*, 721 F.3d 764 (7th Cir. 2013), FERC's decision allowing postage stamp cost allocation for MVP projects was upheld, finding that even a "crude" analysis is sufficient, but case was remanded for FERC to justify its refusal to allow MISO to impose a fee on exports to PJM
- On remand, FERC conducted a hearing and found that in light of changed circumstances, imposition of the fee on exports to PJM was justified, 156 FERC ¶ 61,034 (2016), but this decision is still subject to rehearing at FERC

## MISO-PJM Seam

Direction of Power Flow is MISO to PJM



**V. SOME ORDER 1000  
ISSUES TO BE RESOLVED**

# Order 1000 Issues to be Covered

- FERC has faced some cases that pose significant issues relating to transmission planning and cost allocation and had a Technical Conference on June 27-28, 2016, to discuss them
  - The key topics discussed were:
    - Cost containment provisions
    - Transmission incentives and the competitive transmission development processes
    - Interregional transmission coordination issues
  - It appears desirable for FERC to provide guidance on these subjects, but it has not done so yet
- In addition, another issue looming in the West is the impact that enlarging the CAISO will have on regional planning and cost allocation

# Impetus for Cost Cap Discussion

- When regions select a Project Sponsor to build a transmission line, applicants often agree to cost caps
- Planning regions, however, do not set transmission rates since they are set by FERC
- In 2016 an independent transmission developer, ITC, filed a petition for a declaratory order with FERC requesting that the Commission find:
  - (1) binding revenue requirement bids selected as the result of Commission-approved, Order No. 1000-compliant, and demonstrably competitive transmission project selection processes will be deemed just and reasonable when filed at the Commission as a stated rate and
  - (2) such binding bids may not subsequently be changed by means of a complaint filed under FPA section 206 unless required by the public interest
- FERC did not grant the petition, but indicated that it would set up a Technical Conference to discuss the issues raised

# Technical Conference Comments on Cost Caps

- It is clear from the comments that there are problems with respect to how costs are taken into account in selecting a Project Sponsor
- For developers, there is substantial uncertainty regarding whether to propose a cost cap and, if so, what it should be since costs are uncertain and rates will be set by FERC later
- For those selecting a Project Sponsor, it is also difficult to evaluate cost caps since it is not known if the caps will actually limit costs or rates
- Many who commented suggested that if planning regions impose cost caps, they should only be imposed for expected construction costs

# Transmission Rate Incentives

- One of the reasons that it is difficult to compare potential project sponsors is that FERC may grant transmission incentives
- In 2005 Congress gave FERC authority to adopt rate incentives under FPA Section 219
- Sample incentives
  - FERC can reduce risks by, for example, pre-authorizing: (1) recovery of Construction Work in Progress (“CWIP”); and (2) recovery of abandoned plant; and (3) recovery of pre-commercial costs as an expense or as a regulatory asset
  - FERC will increase the ROE for turning over control to RTO, ISO
  - FERC can also authorize an increased rate of return on equity for taking on significant risks
- At FERC Technical Conference, many suggested that FERC should make it clear that Project Sponsors that participate in a competitive solicitation process will, at a minimum, get the CWIP and abandoned plant incentives

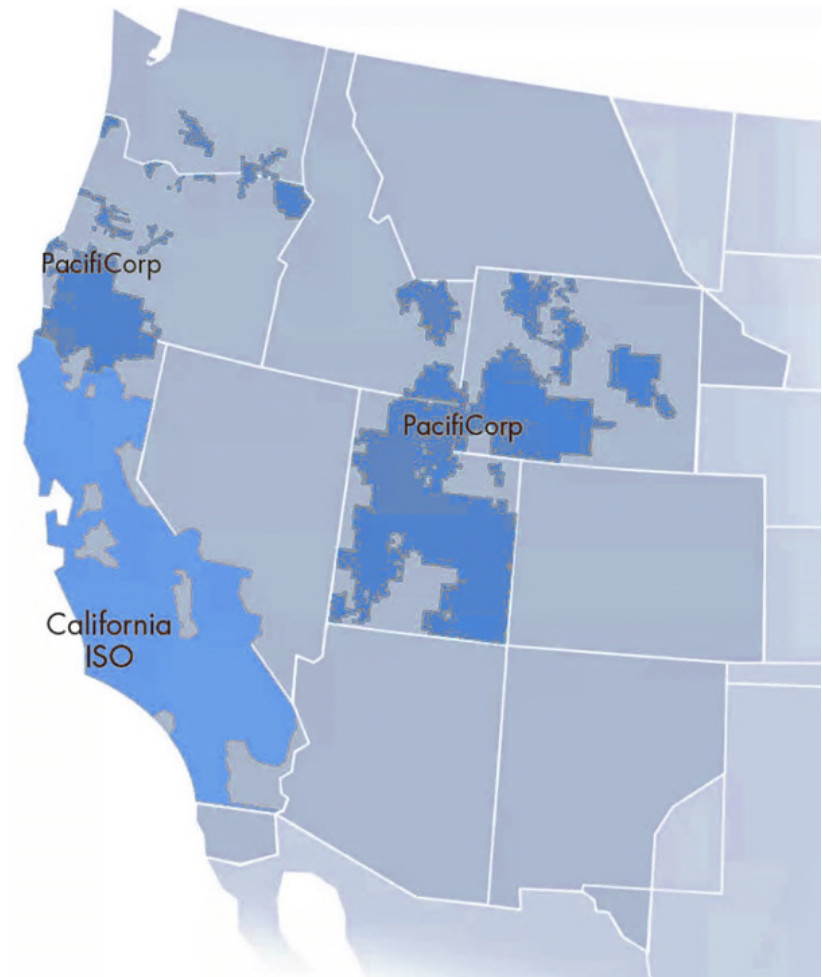


# Interregional Plans

- It is clear from the comments that are significant problems with implementing the interregional planning provisions. For example:
  - Neighboring regions are not required to use the same methodology to select projects, so they may find it difficult to coordinate with respect to interregional projects
  - If the developer of an interregional project wants to be selected for cost allocation, the project must first be selected in the affected regions, but the project may be much more desirable for one region than the other, so it may not be selected by both even if overall it is better than two regional alternatives
- As some lawsuits recently brought by MISO Transmission Owners regarding interregional plans make clear, developers want abandoned plant recovery for their costs if a regional line is abandoned in favor of an interregional line

# Impact of Possible CAISO/PacifiCorp Region on Order 1000 Implementation in the West

- If PacifiCorp joins CAISO it appears likely they will be in the same Order 1000 planning region, so there may be a change to how Order 1000 is implemented in the West
- The CAISO already has draft cost allocation rules for a combined CAISO/PacifiCorp region:
  - CAISO and PacifiCorp would be subregions
  - For new lines only in one subregion, the existing rules would be used
  - For new lines in both subregions, the purpose of the line would determine the cost allocation
- Not clear what the impact would be on other Order 1000 planning regions



Source: RTO Insider

# Questions?



Source: [VisitTehachapi.com](http://VisitTehachapi.com)

## Wind Farms Near Tehachapi, CA

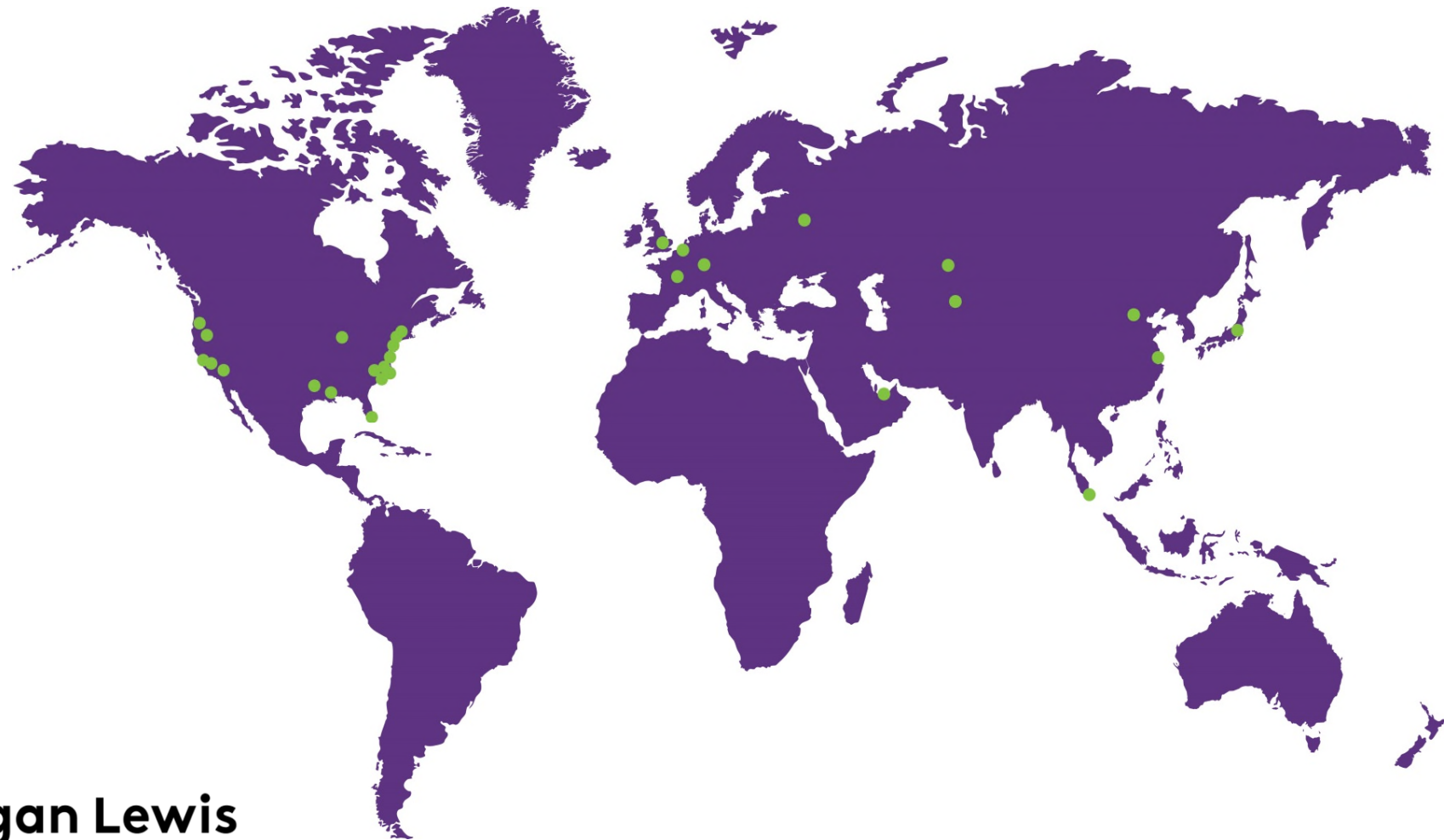
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## Our Global Reach

Africa  
Asia Pacific  
Europe  
Latin America  
Middle East  
North America

## Our Locations

Almaty	Dallas	Los Angeles	Philadelphia	Silicon Valley
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Boston	Hartford	New York	San Francisco	Washington, DC
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