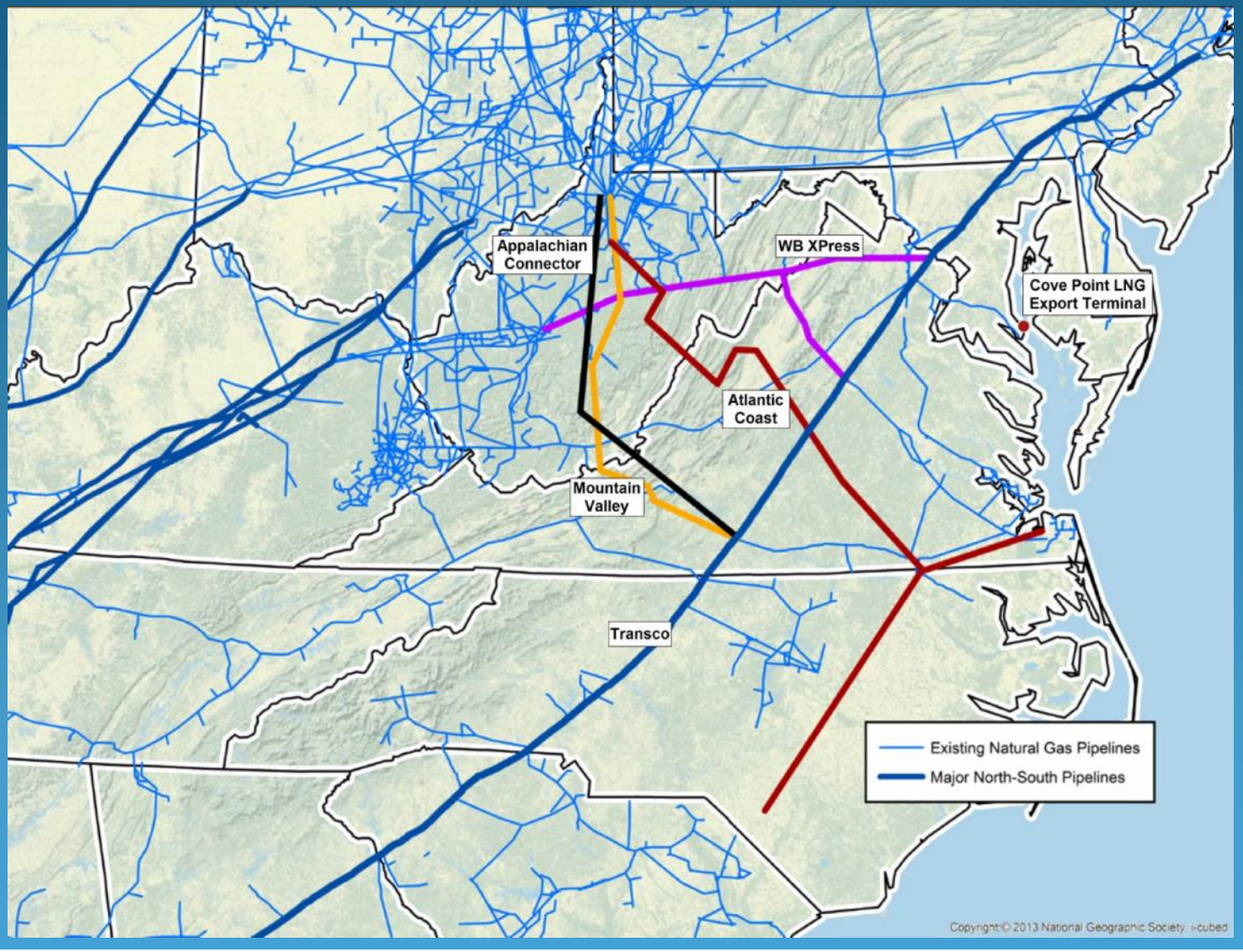
Why New Pipelines Are Unnecessary

3 Proposed Pipelines



Are New Pipelines Needed?

Serve an Underserved Area

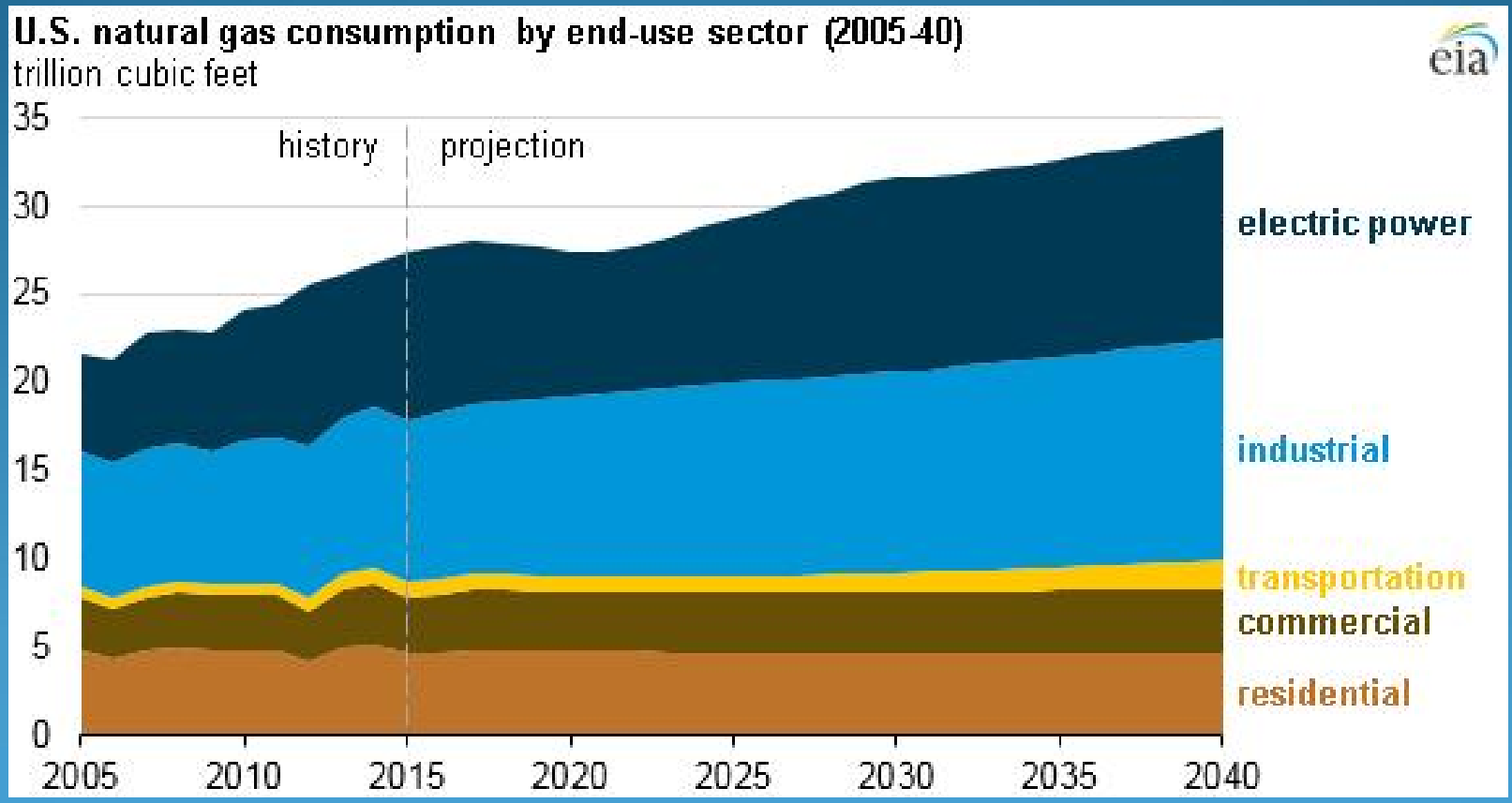
Provide Cheaper Service

Source of Gas Demand

Traditional Uses of Natural Gas

Traditional Uses of Natural Gas

Increasing Just 0.3% per year



Gas Needed for Power Plants

11 Power Plants in the 14 years

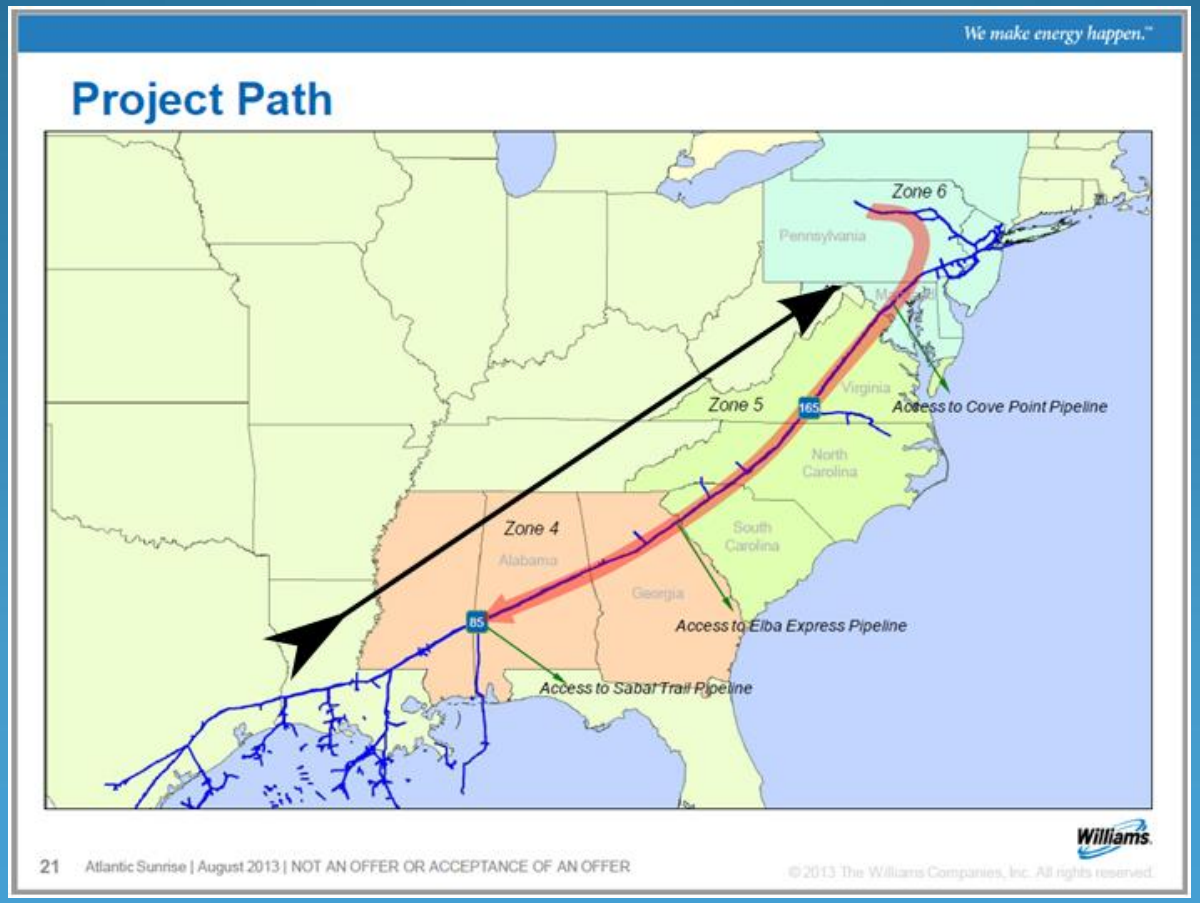
No Need for Two Pipelines

Only one need – new power plants

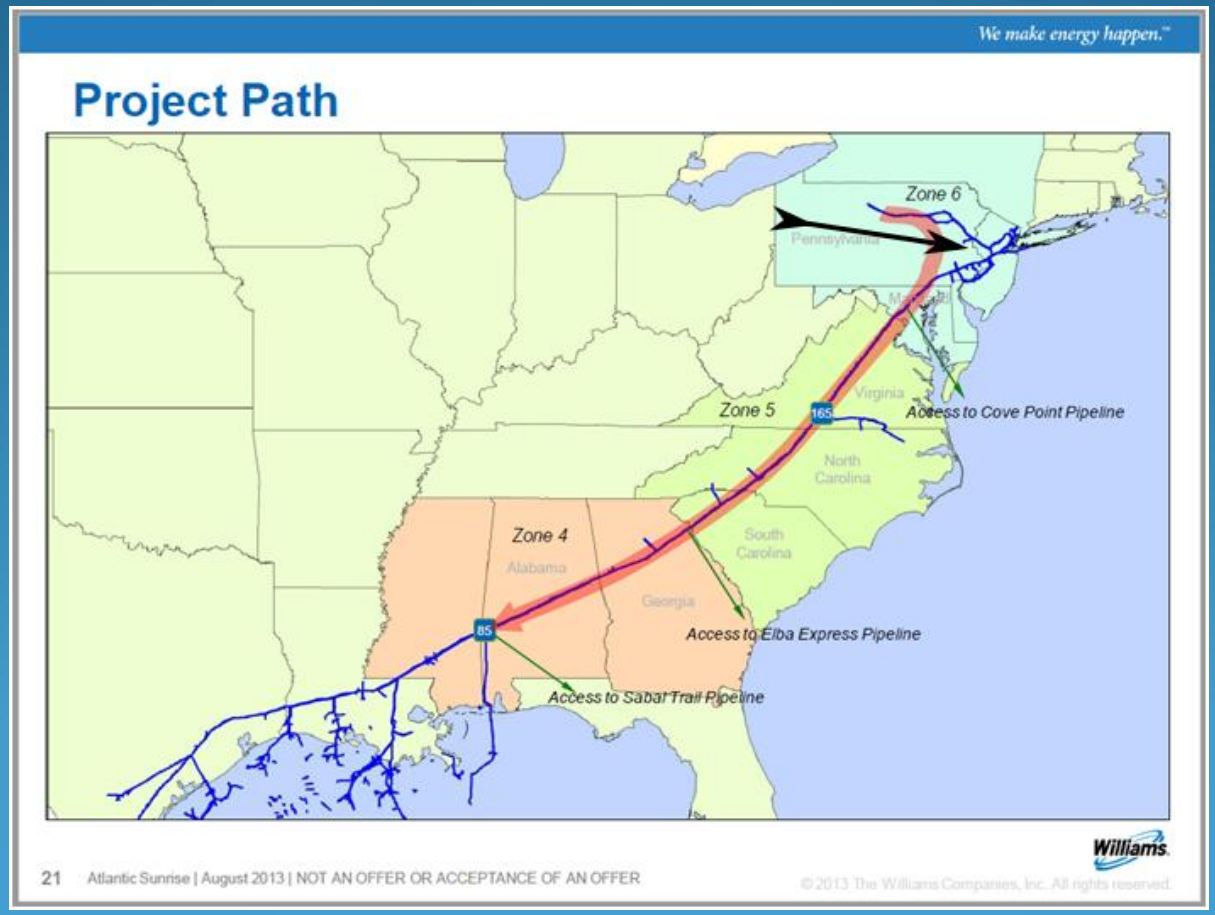
That need can be served by

Existing Pipelines

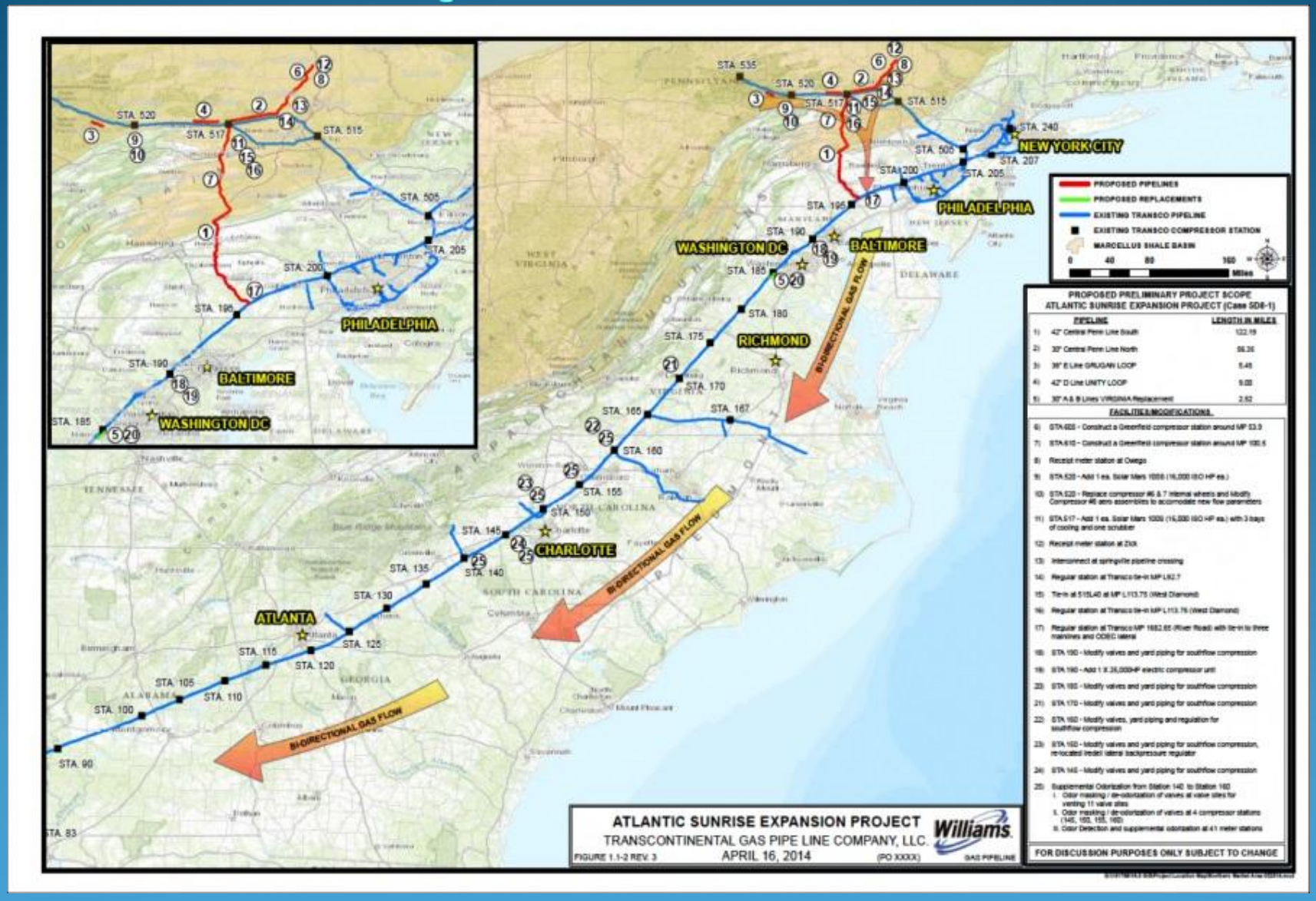
Existing Pipelines Have Enough Capacity



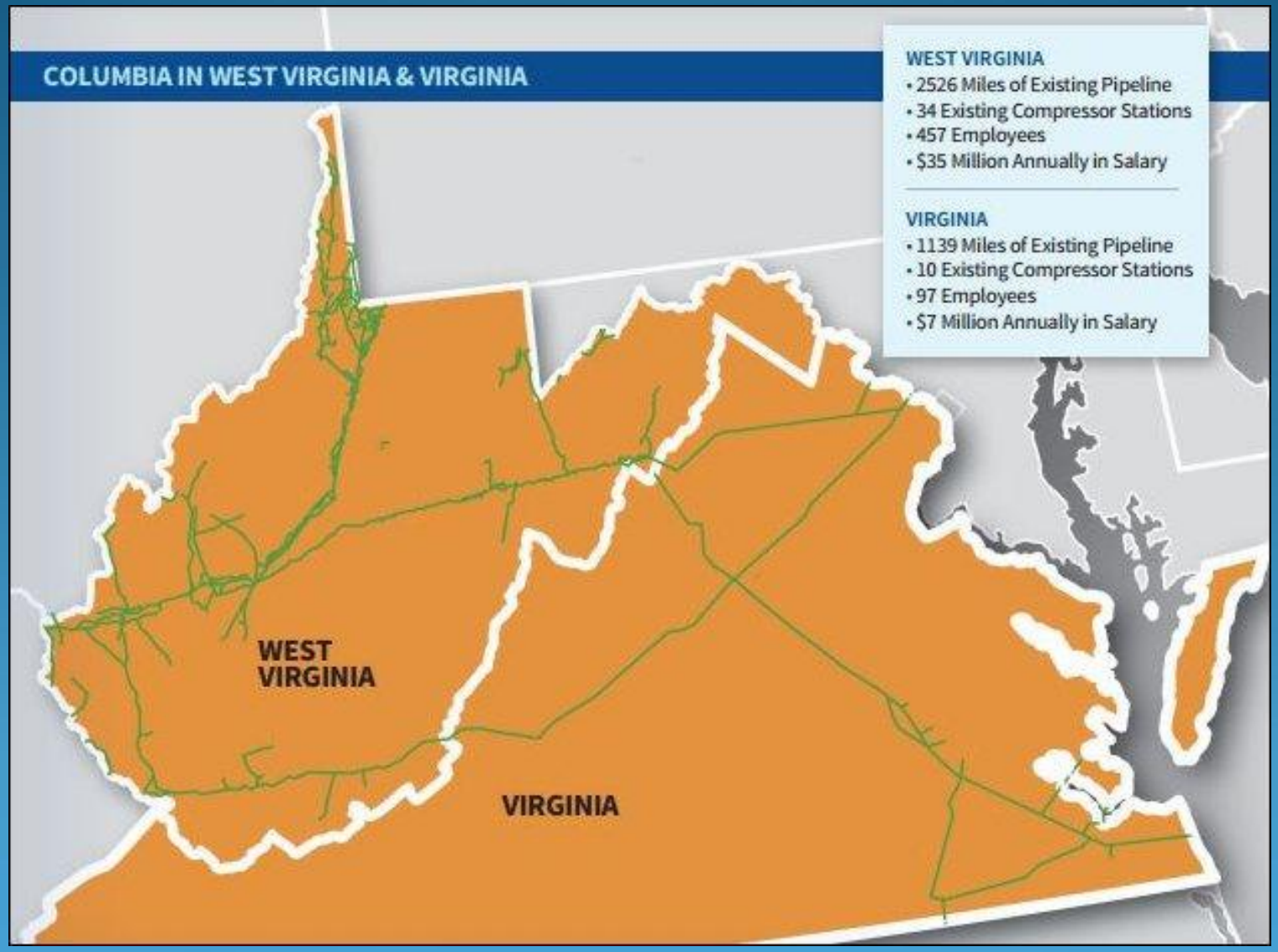
Marcellus Serves NE Directly



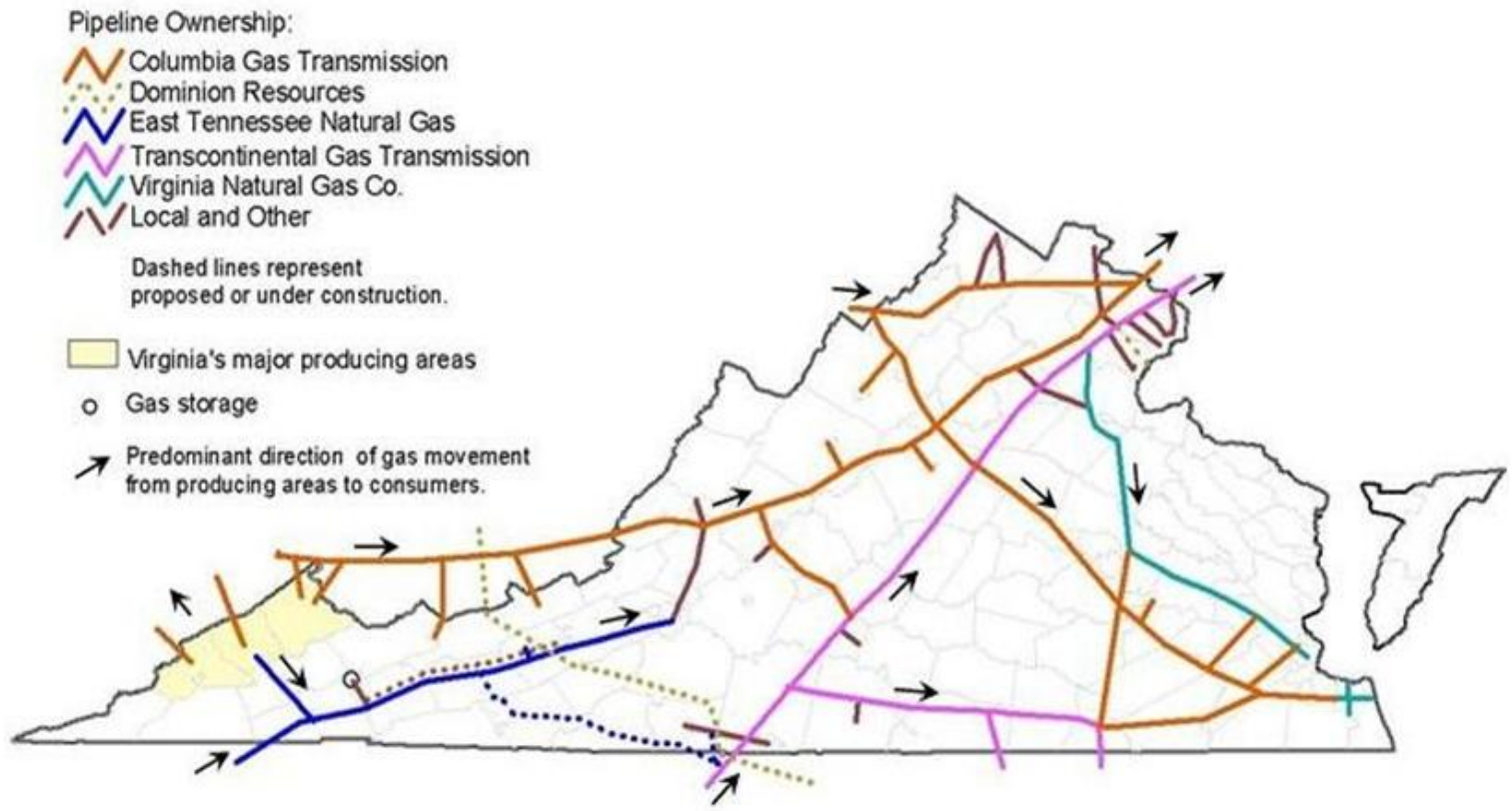
5-6 Bcf/d Southbound



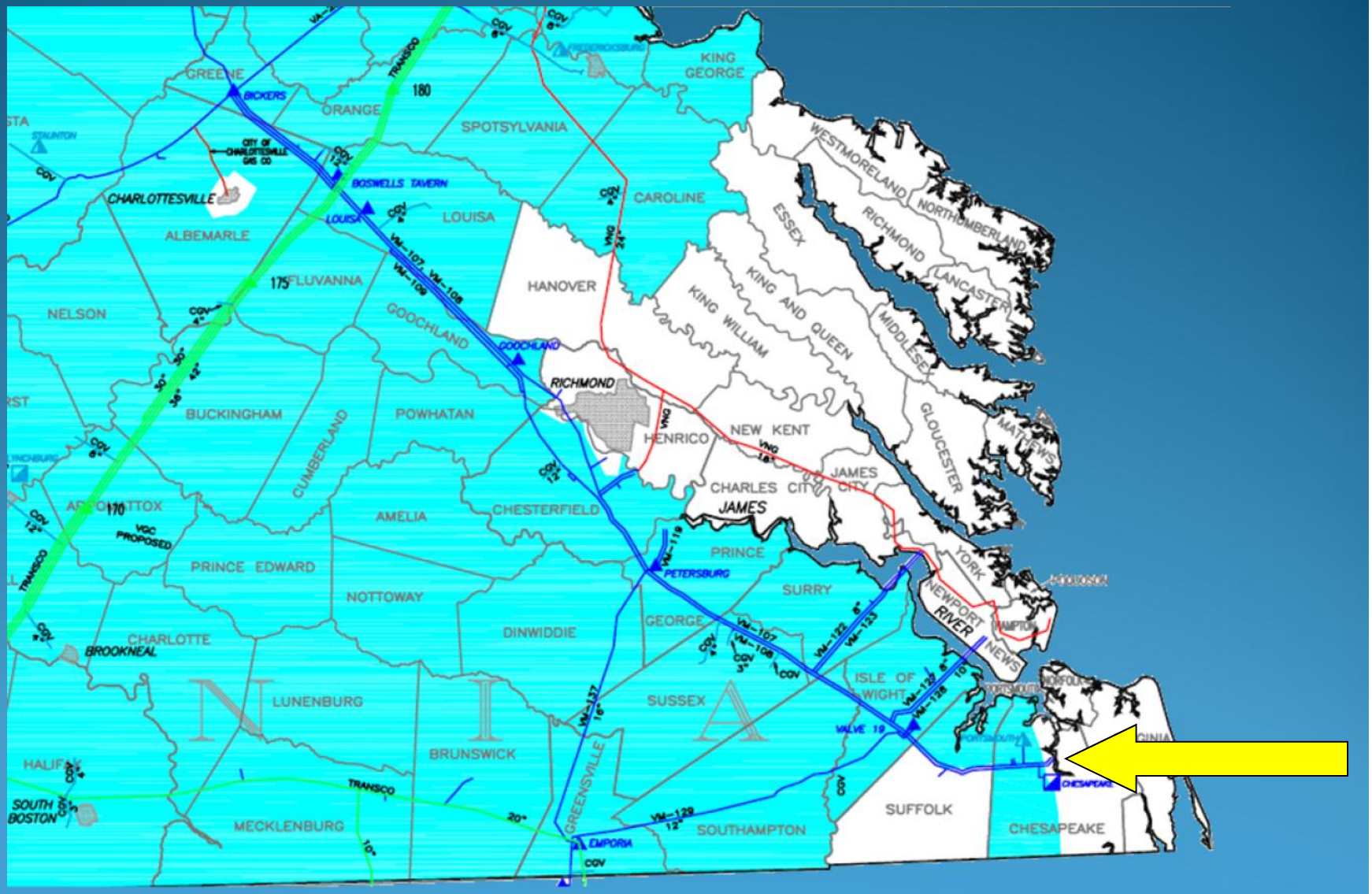
Columbia Gas Expansion



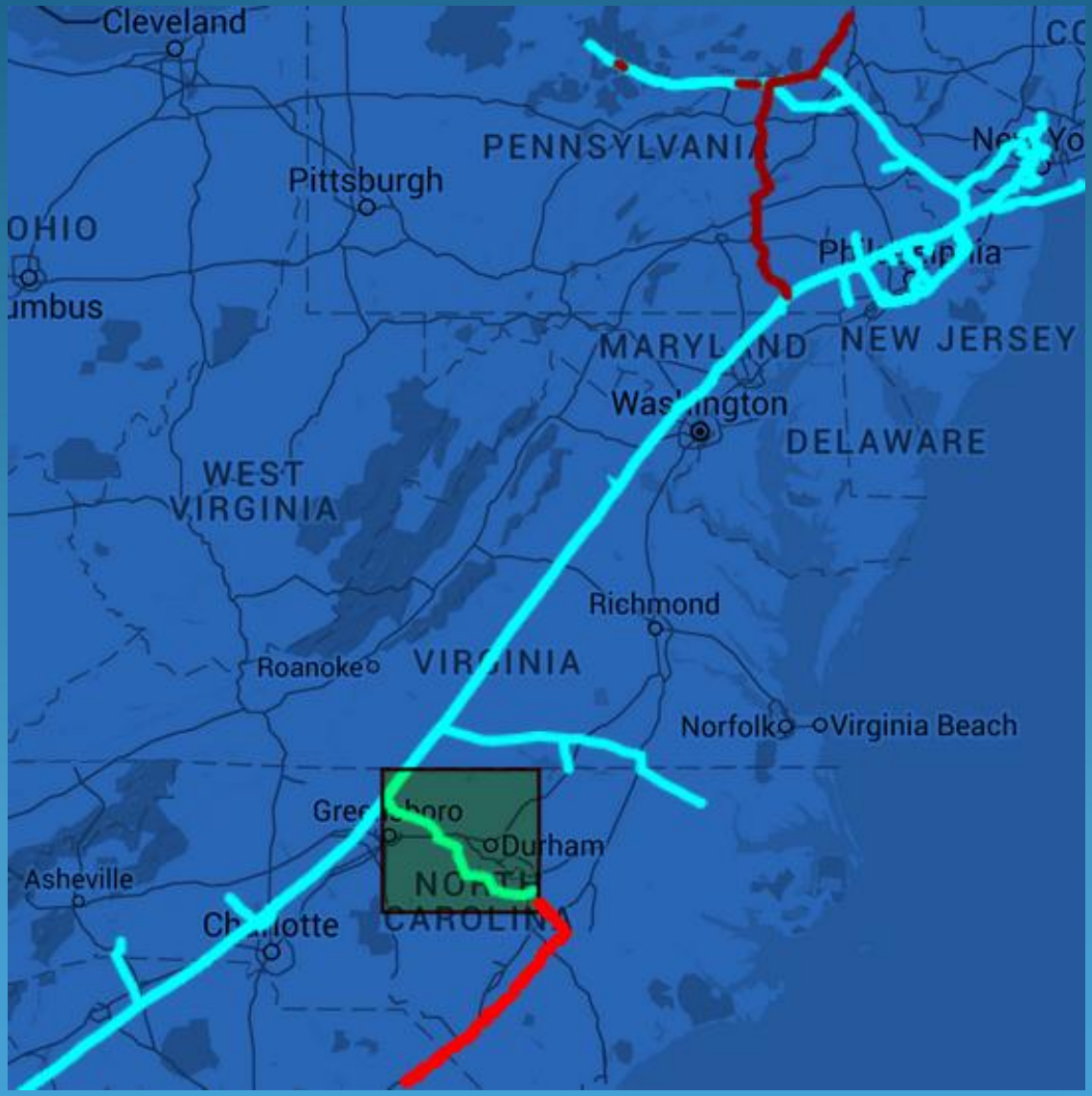
WB XPress


Pipeline Ownership:
Columbia Gas Transmission
Dominion Resources
East Tennessee Natural Gas
Transcontinental Gas Transmission
Virginia Natural Gas Co.
Local and Other
Dashed lines represent proposed or under construction.
Virginia's major producing areas
Gas storage
Predominant direction of gas movement from producing areas to consumers.

SE Virginia


GREENE
ORANGE
SPOTSYLVANIA
KING GEORGE
WESTMORELAND
NORTHUMBERLAND
RICHMOND
LANCASTER
ESSEX
KING AND QUEEN
KING WILLIAM
MIDDLESEX
GLOUCESTER
MATHEWS
CAROLINE
HANOVER
LOUISA
ALBEMARLE
FLUVANNA
NELSON
GOOCHLAND
BUCKINGHAM
POWHATAN
CUMBERLAND
AMELIA
CHESTERFIELD
HENRICO
NEW KENT
CHARLES CITY
JAMES CITY
JAMES
YORK
PRINCE EDWARD
NOTTOWAY
DINWIDDIE
PRINCE GEORGE
SURRY
NEWPORT NEWS
CHARLOTTE
LUNENBURG
BRUNSWICK
SUSSEX
ISLE OF WIGHT
HALIFAX
MECKLENBURG
SOUTHAMPTON
SUFFOLK
CHESAPEAKE
CHARLOTTESVILLE
BOSWELLS TAVERN
RICHMOND
PETERSBURG
EMPORIA
BRICKERS
BROOKNEAL
SOUTH BOSTON
TRANSCO
VALVE 19
180
175
170

North Carolina



How Do We Know There is Enough Capacity?

Synapse Energy Economics

Analyzed Peak Usage

Traditional Uses Forecasted by LDC's

New Power Plants from IRP's

Survey of Resources

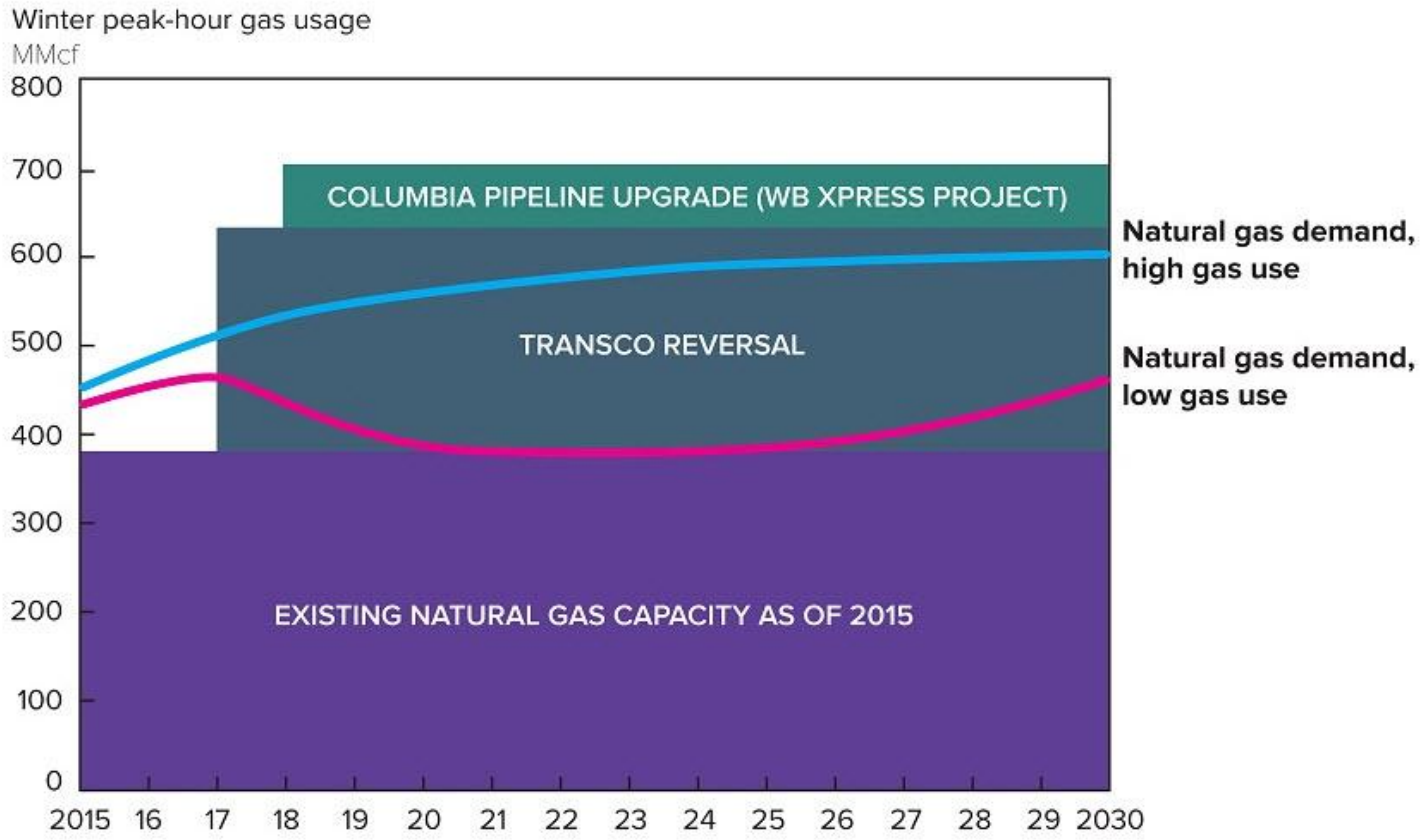
Existing Pipeline Capacity

Planned Expansions

Local Storage Capacity

Synapse Confirmation

ACP & MVP ARE NOT NECESSARY
TO MEET NATURAL GAS DEMANDS NOW OR IN THE FUTURE



Utility View

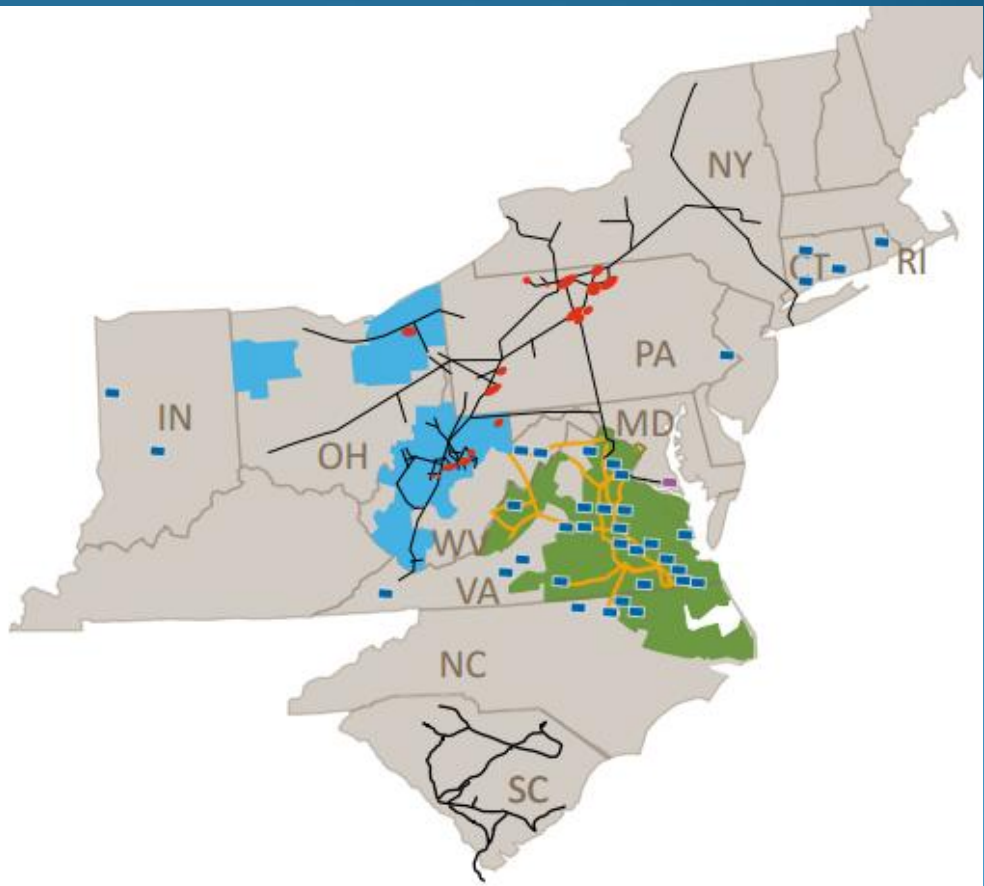
No response to “Open Season”

Pipelines are “Fully Subscribed”

- Transco
- Atlantic Sunrise
- MVP

Utility View

- 24,600 MW of electric generation
- 6,455 miles of electric transmission
- 12,200 miles of natural gas transmission, gathering and storage pipeline
- 928 billion cubic feet of natural gas storage operated
- Cove Point LNG Facility
- 2.5 million electric customers in VA and NC
- 1.3 million natural gas customers in OH & WV
- 1.2 million non-regulated retail customers in 13 states (not shown)
- 252 MW of contracted solar generation in 6 states (not shown)



Need More Pipelines?

Utility View

Fits long-term plans

Ease of operations

Make money

Ratepayers & Citizens

No Thank You – we don't need it

FERC's View

Precedence Agreements are not enough to show need for a new pipeline

Affiliate Agreements do not prove Market Demand

But we approve nearly all applications

DOE's View

"Pipelines … from the Gulf Region to the north are projected to reverse flow so that Marcellus production can serve the Virginia and Carolinas market."

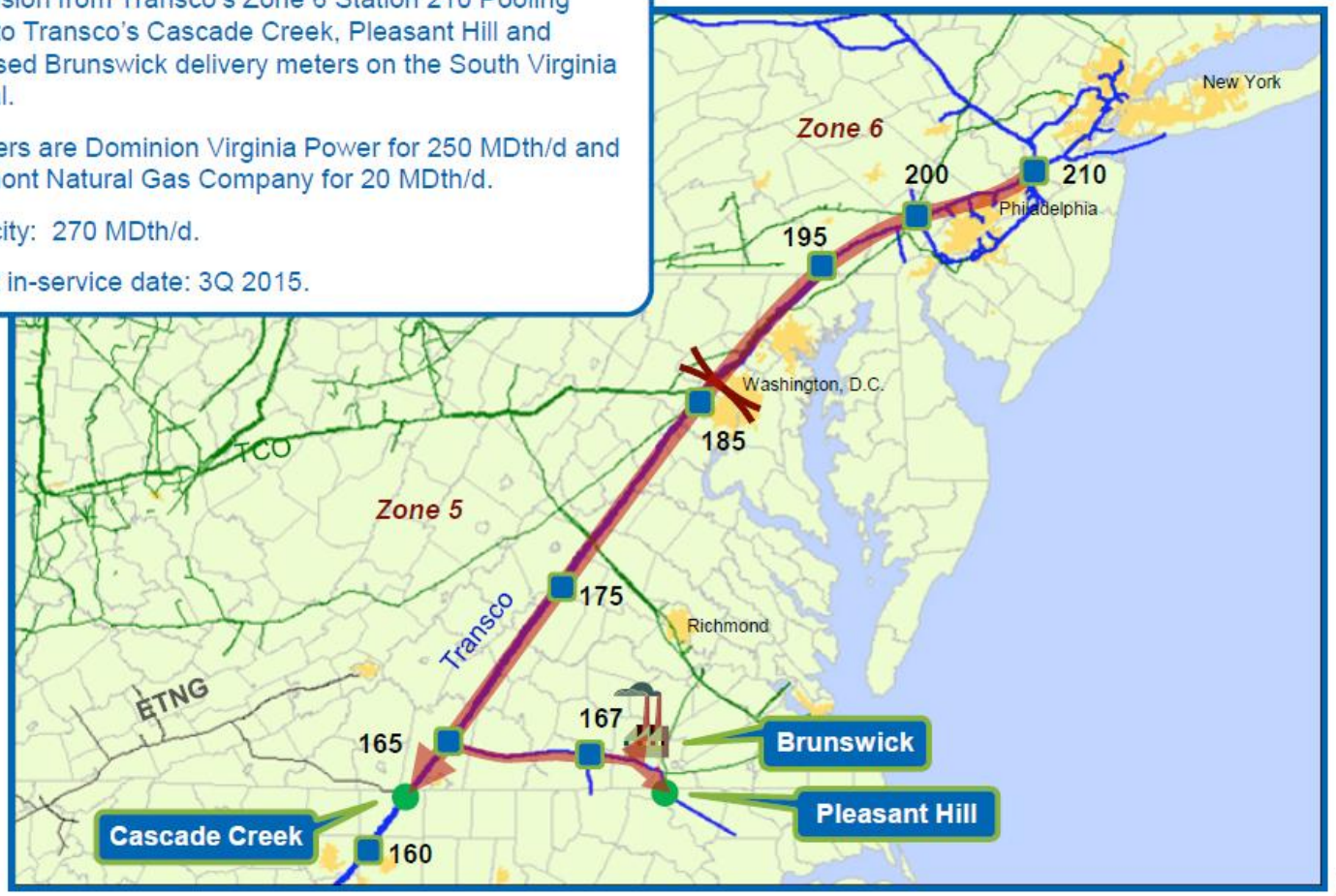
U.S. Department of Energy

Will They be Cheaper?

Transco Connection 2015

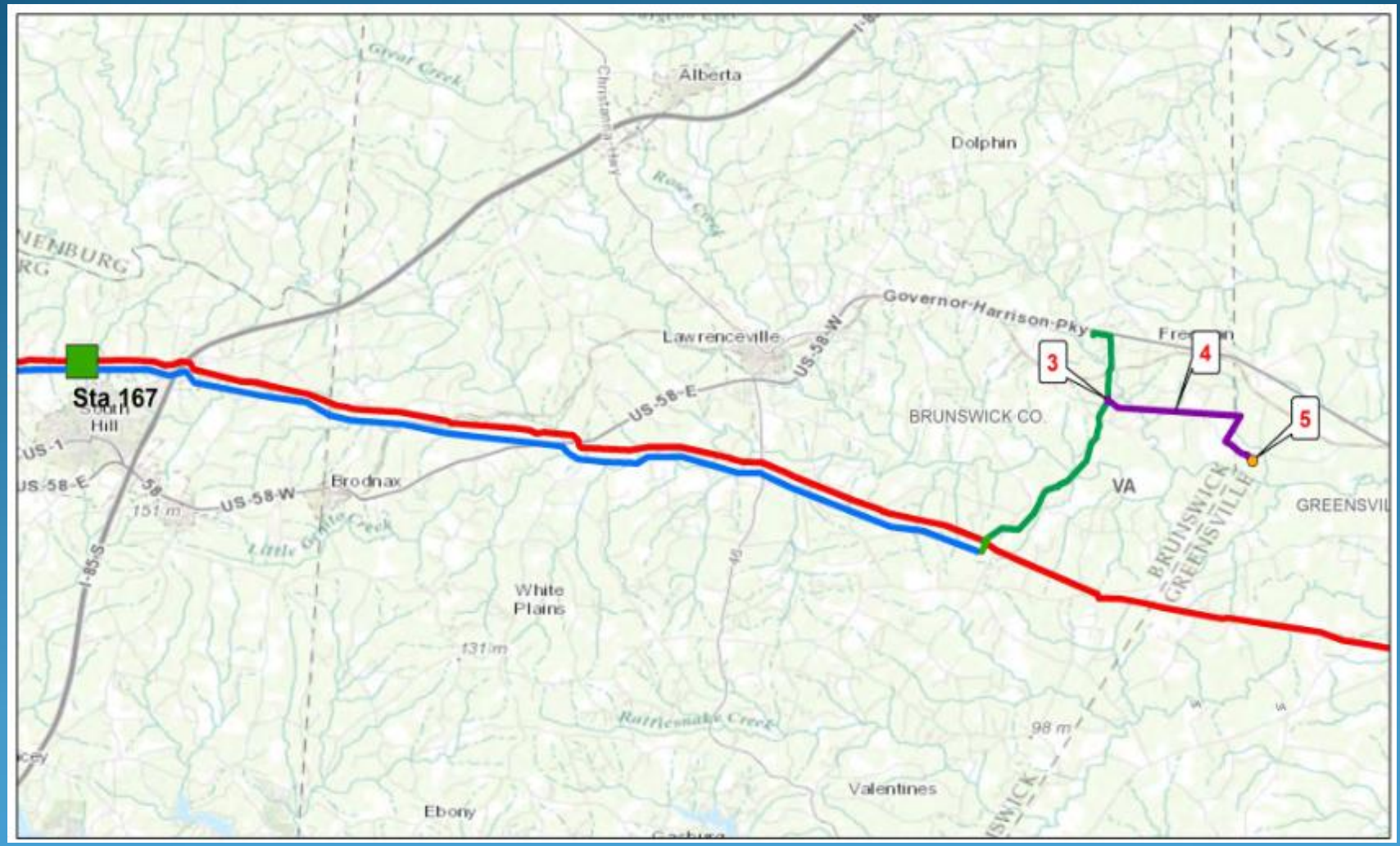
Virginia Southside Expansion

- Expansion from Transco's Zone 6 Station 210 Pooling Point to Transco's Cascade Creek, Pleasant Hill and proposed Brunswick delivery meters on the South Virginia Lateral.
- Shippers are Dominion Virginia Power for 250 MDth/d and Piedmont Natural Gas Company for 20 MDth/d.
- Capacity: 270 MDth/d.
- Target in-service date: 3Q 2015.



Williams

Brunswick and Greensville



Transportation Costs

	Transco	ACP
Total Rate Base	$0.491 billion	$4.986 billion
Rate of Return	15.34%	15.00%
Depreciation Rate	2.61%	2.50%

Tariff

	Transco	ACP
Daily Recourse Rate	$0.52785 /Dth	$1.7249 /Dth
Daily Demand	500,000 Dth/d	500,000 Dth/d
Annual Cost	$ 96 million	$314.8 million

Ratepayers Subsidize Pipeline

Ratepayers pay $218.5 million more /yr

Just for transportation

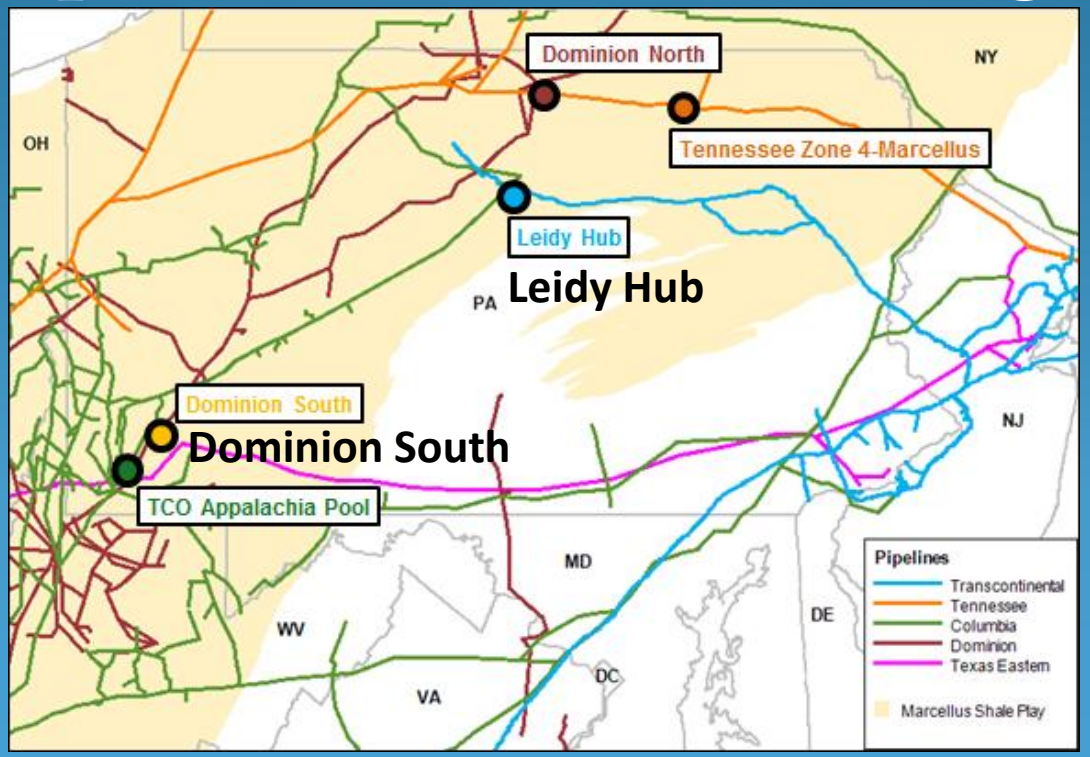
New Pipelines Cost More

New pipelines – not depreciated, cost more

Existing pipelines – mostly paid for by previous customers

Cost of Gas

Ratepayers pay $ 91 million more /yr to purchase the natural gas



Not What they Told Us

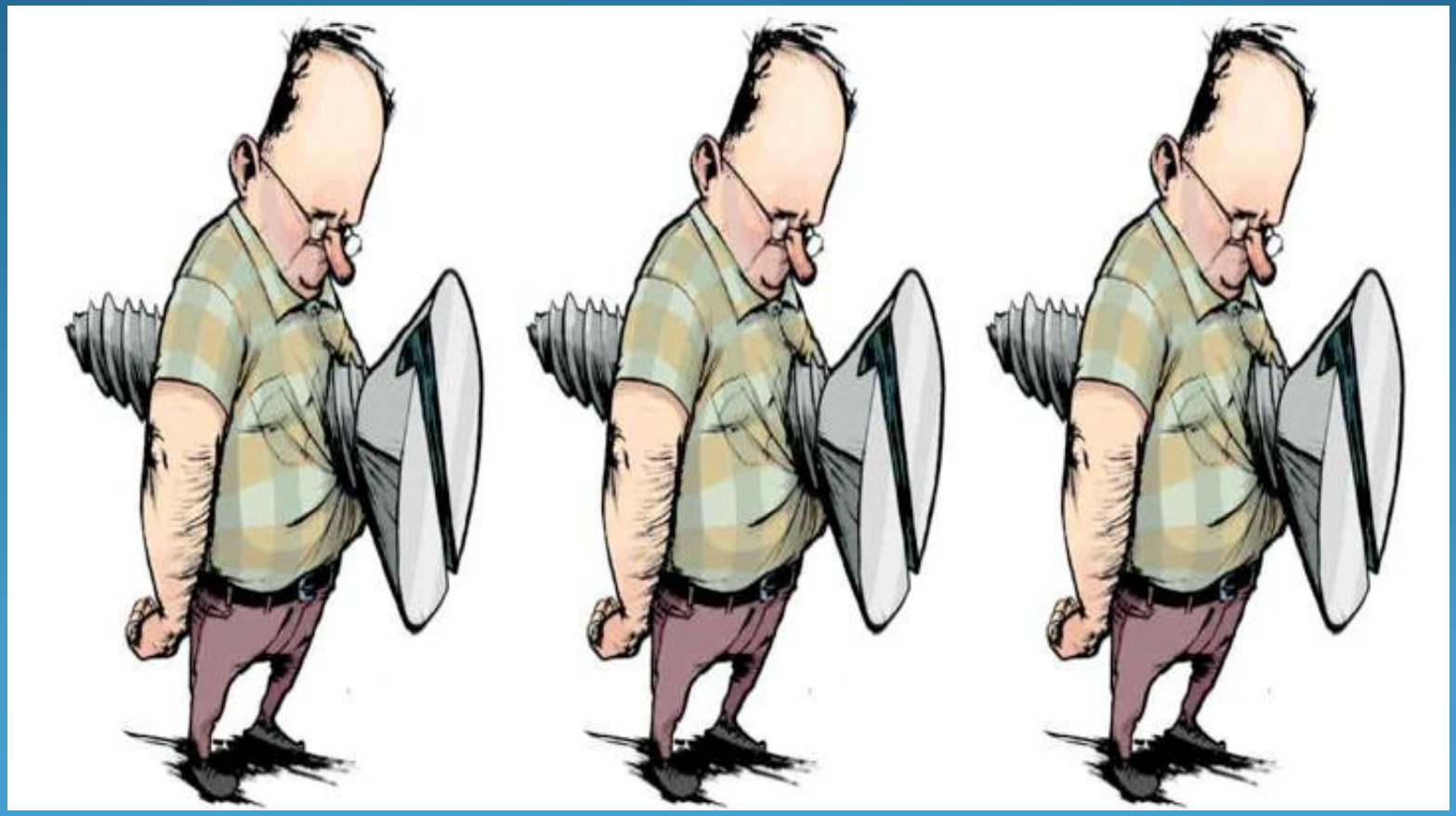
ICF Study - $377 million /yr savings

ACP is the “only” way to access lower cost natural gas

Reality – Costs ratepayers over $300 million /yr for just 2 plants

More for the rest

Ratepayers Subsidize New Pipelines



Does it Serve the Public Good?

Not needed for adequate gas supply

Does it Serve the Public Good?

Not needed for adequate gas supply

Costs more than existing pipelines

Does it Serve the Public Good?

Not needed for adequate gas supply

Costs more than existing pipelines

Exists purely for private gain

Does it Meet the Standard for Eminent Domain?

Natural Gas Act

" . . . shall conform . . . with the practice and procedure . . . in the courts where the property is situated."

Virginia Constitution

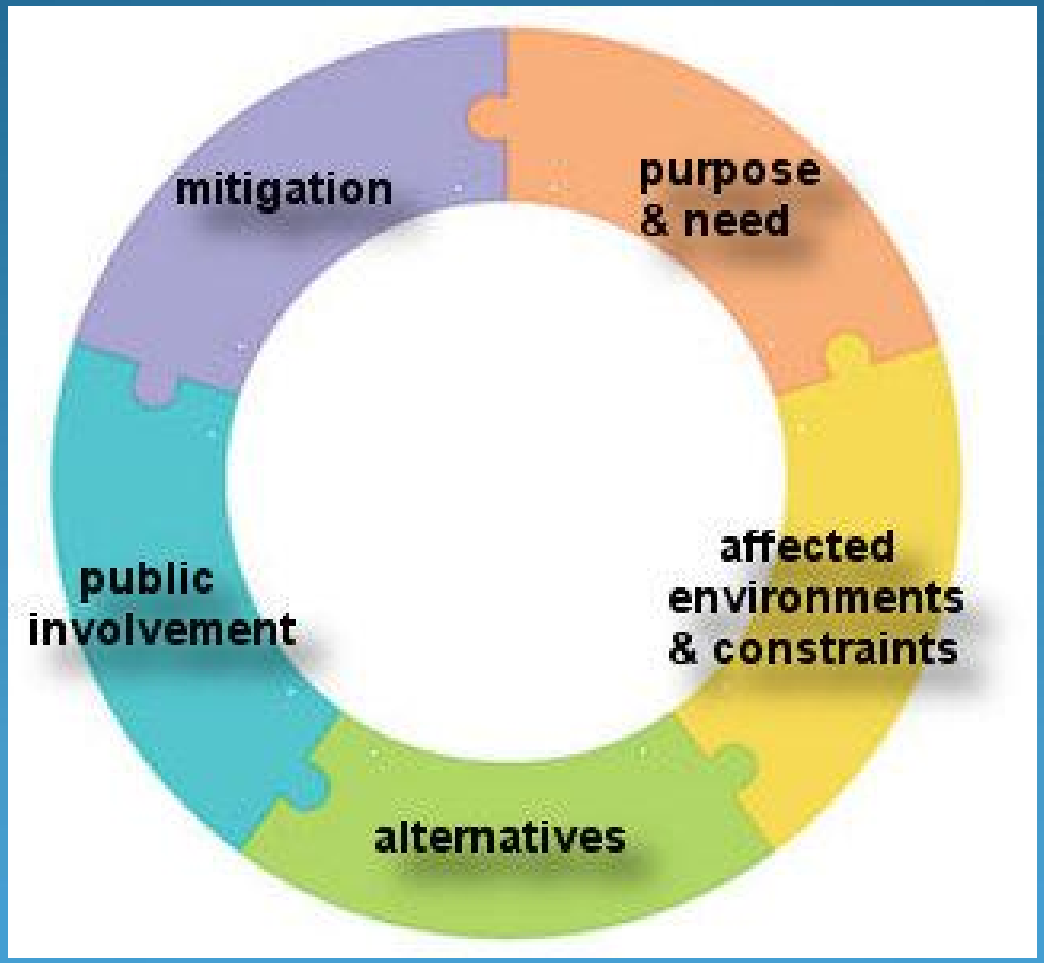
" . . . taking or damaging of private property is not for public use if the primary use is for private gain, private benefit, private enterprise . . .

Virginia Constitution

"The condemnor bears the burden of proving the use is public, without a presumption that it is"

FERC Not Following Federal Law

NEPA


mitigation
purpose & need
affected environments & constraints
alternatives
public involvement

NEPA Requires

Identify purpose and need for the action

Thoroughly evaluate alternatives

Not within jurisdiction of agency

Include no action alternative

Told CEQ No

FERC unable to do GHG evaluation

CEQ – we'll show you how

Other federal agencies are doing it

OilChange Int'l will do it for them

Federal Energy Regulatory Commission

Independent agency

Federal Energy Regulatory Commission

Independent agency

Paid by the organizations it regulates

Federal Energy Regulatory Commission

Independent agency

Paid by the organizations it regulates

Ignores federal law & creates own guidelines

FERC – Do Your Job

Represent the People Too

Major Pipeline Projects Certified by FERC

Year	No. of Projects	Capacity (MMcf/d)	Miles of Pipeline	Horsepower (HP)
2005	17	8,746.4	703.0	123,036
2006	19	8,480.6	1,241.4	306,557
2007	28	18,874.2	2,591.2	849,110
2008	24	13,954.2	2,084.1	648,838
2009	23	9,781.0	953.9	728,129
2010	21	9,079.1	1,568.6	496,994
2011	15	4,032.8	303.8	280,255
2012	18	4,449.0	193.1	145,920
2013	17	7,308.9	262.9	185,011
2014	20	10,999.9	418.6	472,932
2015-Nov	20	9,537.0	262.9	292,490
Totals		**105,243.1**	**10,583.5**	**4,529,272**

Source: FERC Commissioner Tony Clark

70 ACP's

Public Pressure

Legislation

Court Cases

Much Bigger Issue

Current Policy

+ Plants = + Pipelines

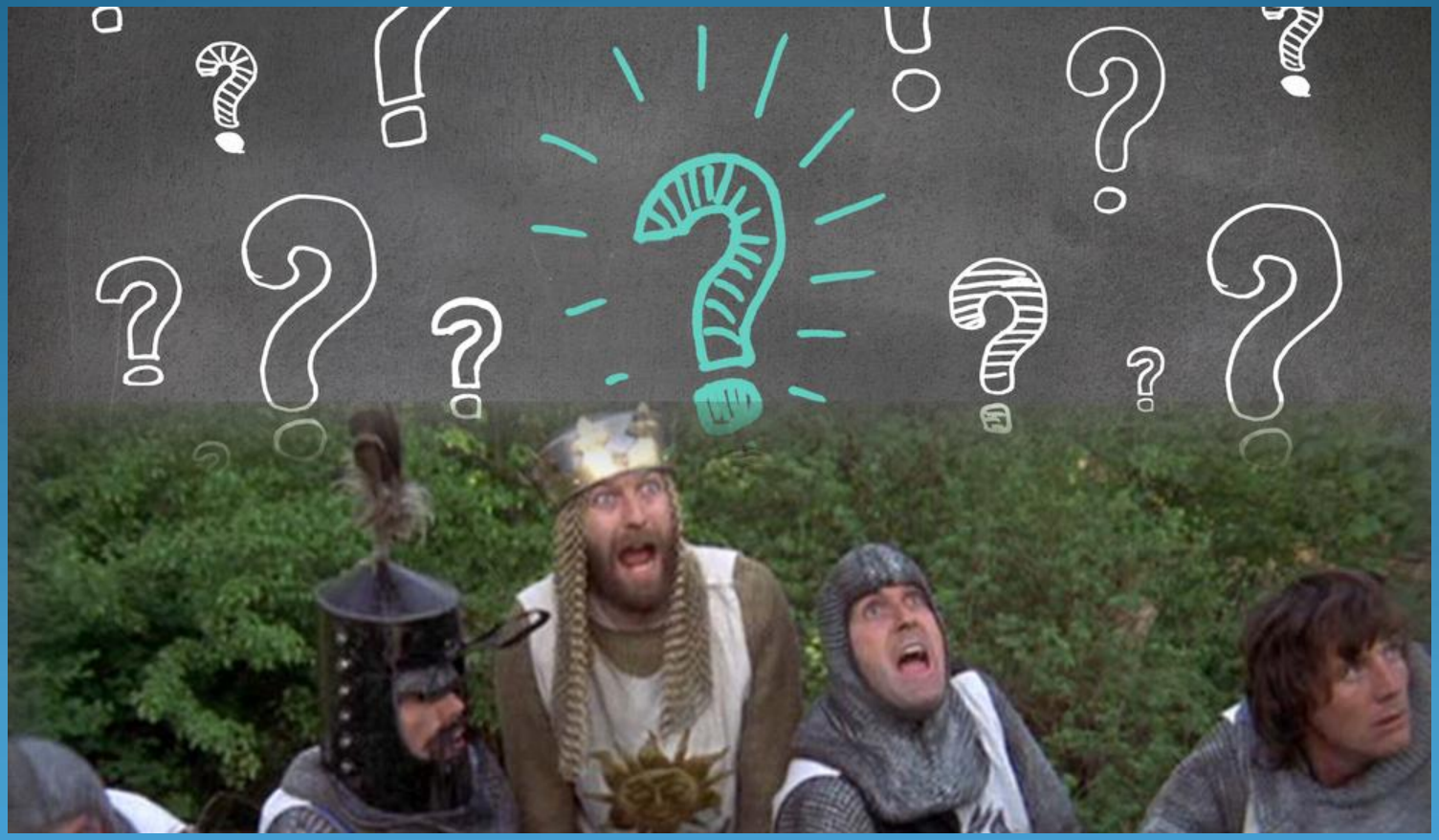
New Pipelines

Pipelines are a symptom of a faulty Energy Policy

New Pipelines

Pipelines are a symptom of a faulty Energy Policy

Do We Need More Gas-fired Power Plants?

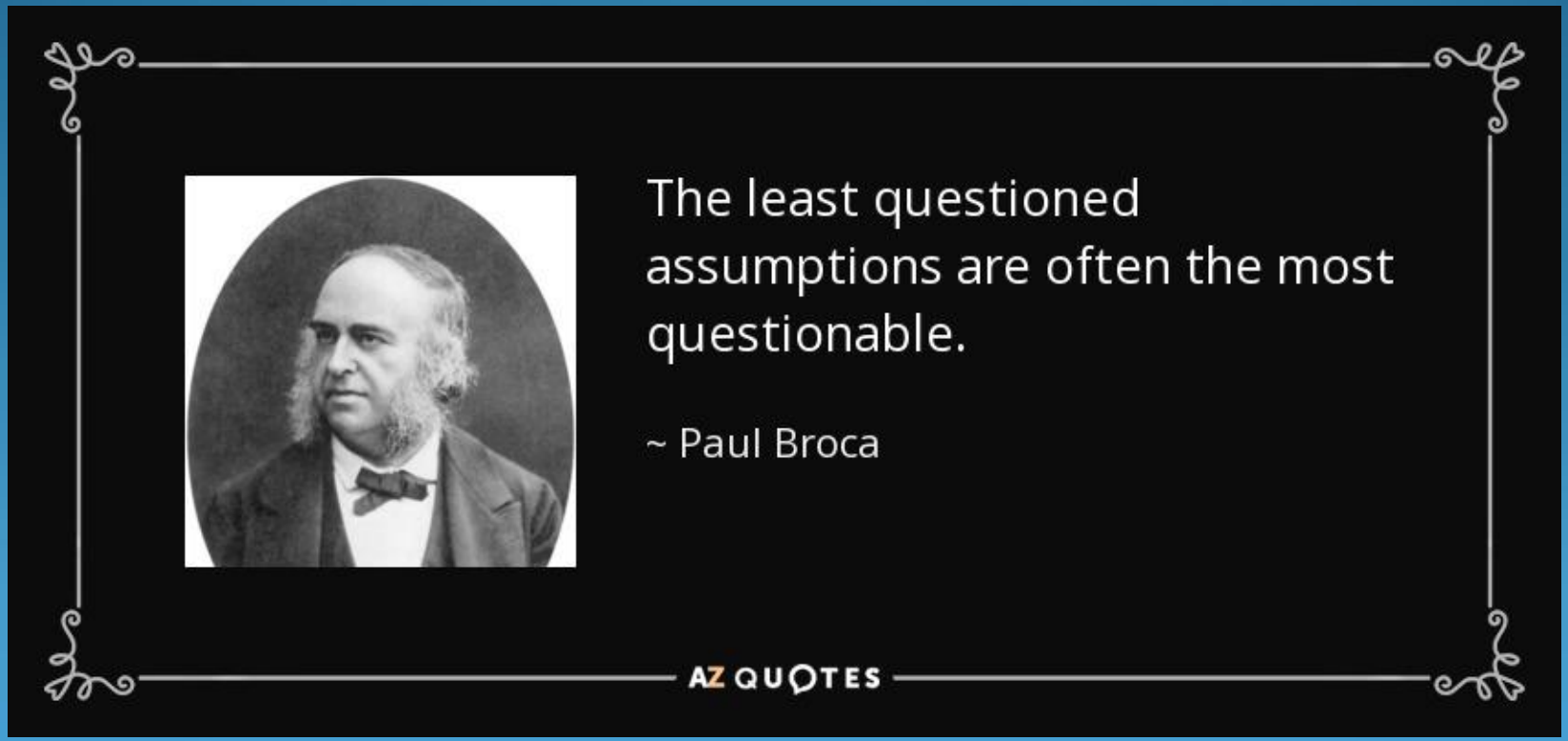


Dominion says YES!

1.5% Annual Demand Growth

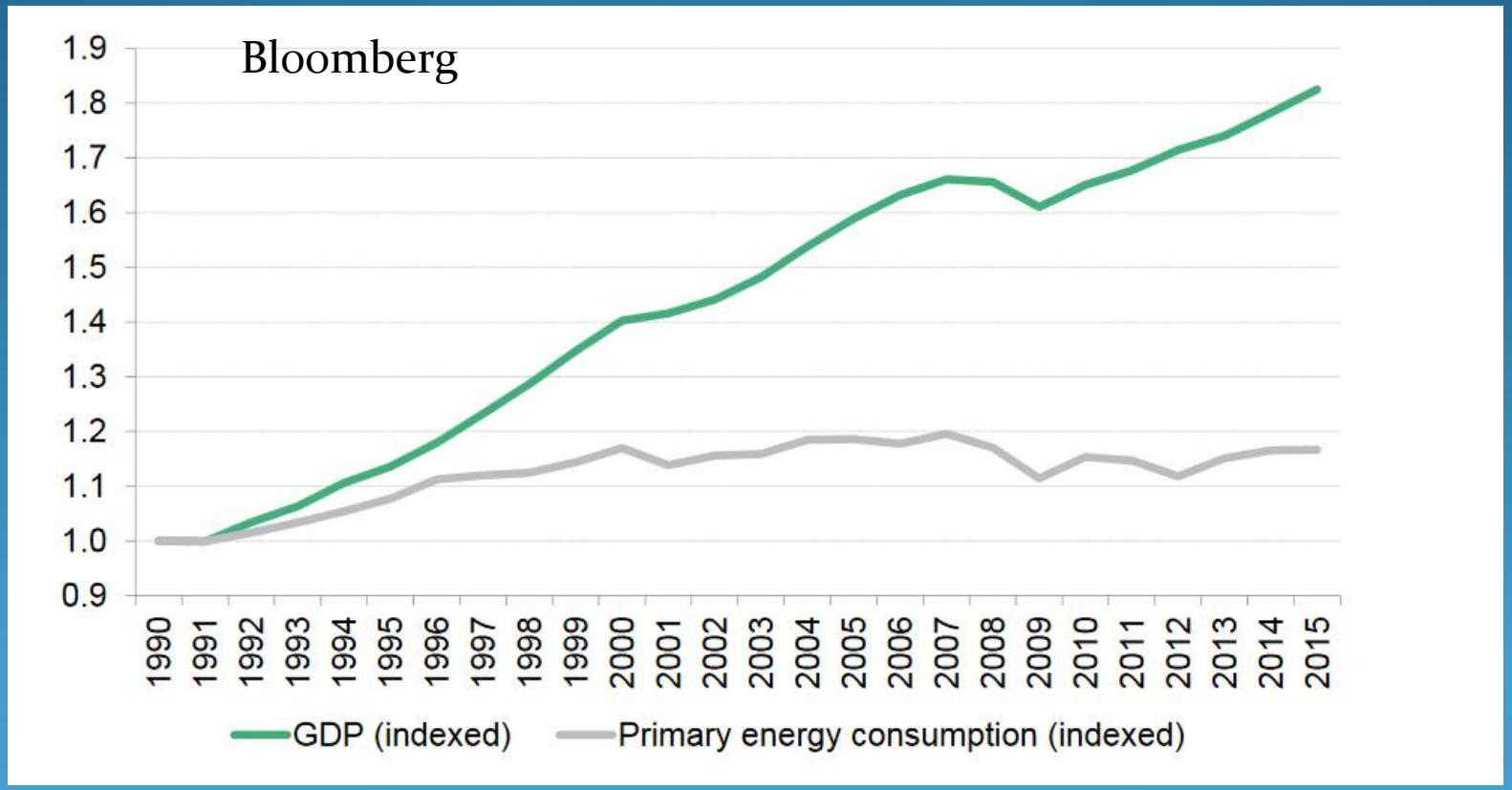
2-3 times others in PJM

Based on questionable assumptions



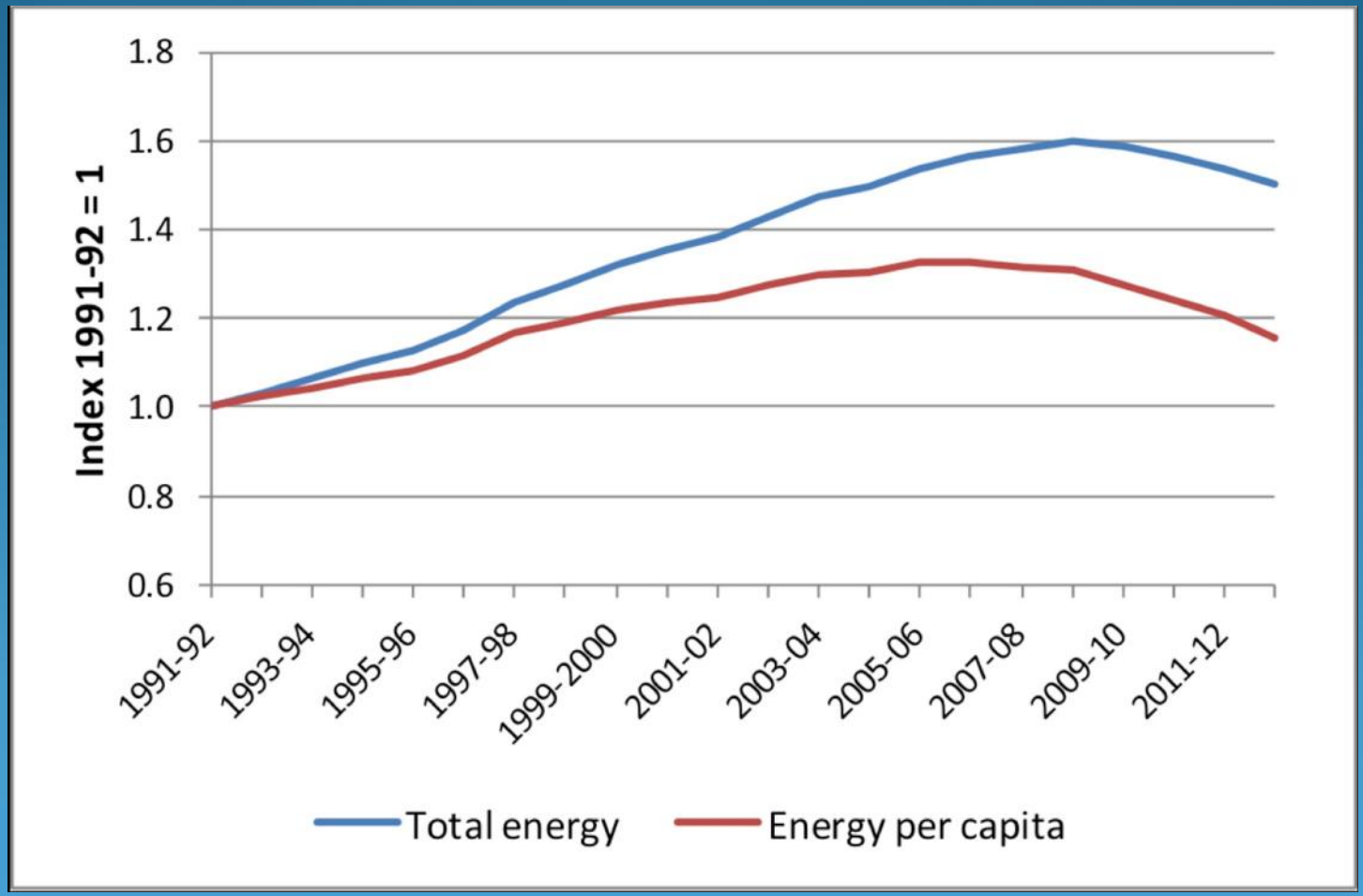
Obsolete Assumptions

Electricity usage grows with GDP



Obsolete Assumptions

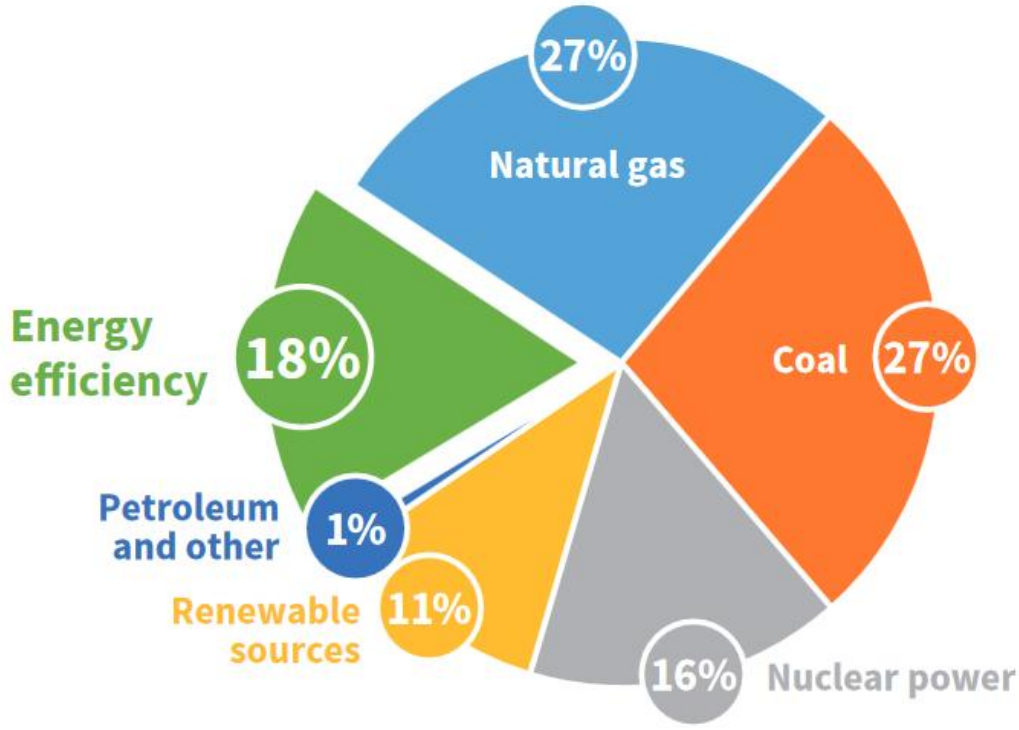
Electricity usage grows with population



Obsolete Assumptions

The only choice is to build more plants

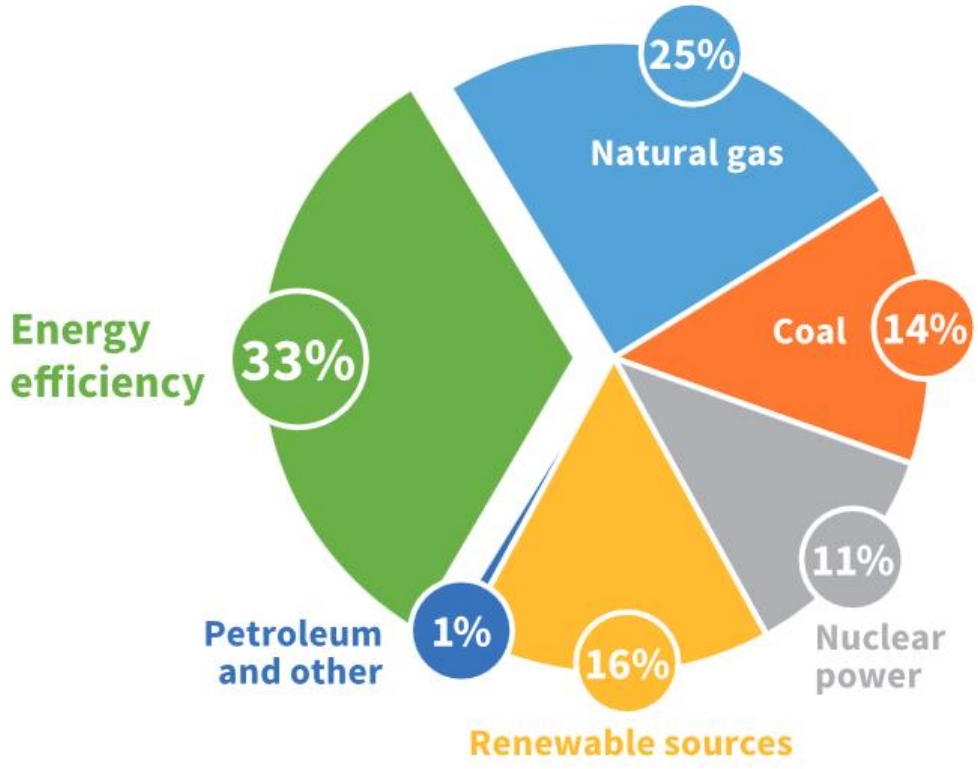
Figure 6. Share of US electricity generation by resource in 2015



Obsolete Assumptions

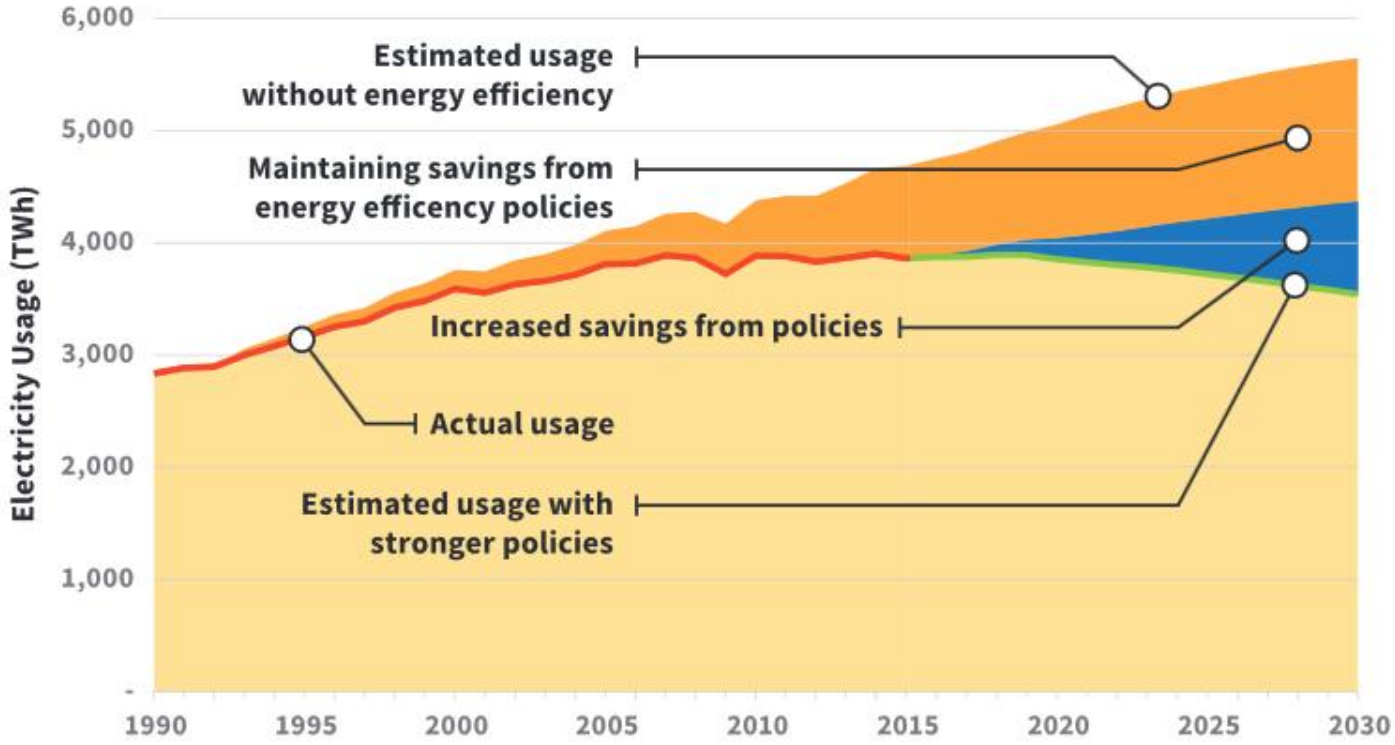
The only choice is to build more plants

Figure 8. Share of US electricity generation by resource in 2030, with increased energy efficiency policies



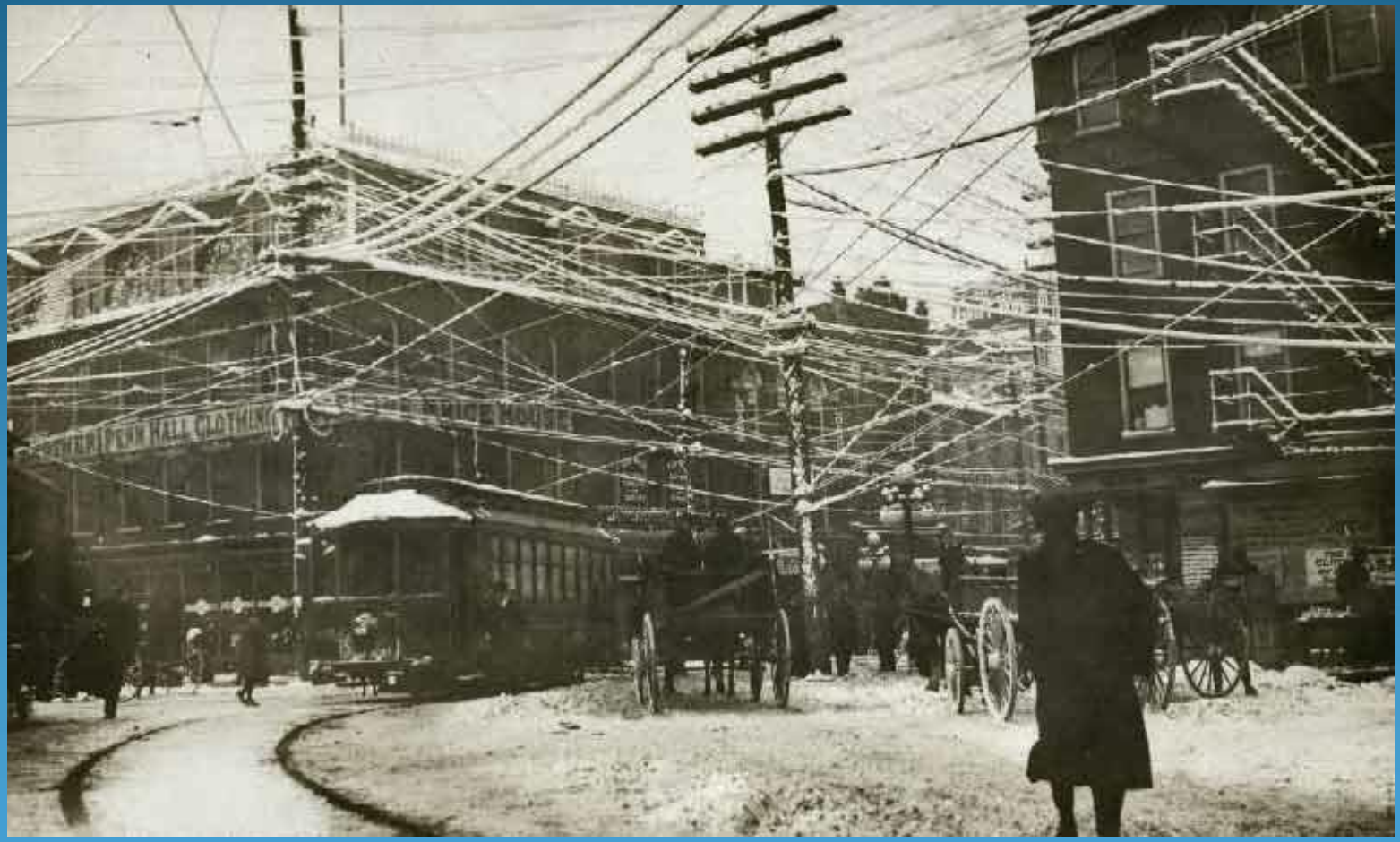
Usage declines with Energy Efficiency

Figure 11. Estimated savings from both maintaining and increasing energy efficiency policies through 2030



20th Century Mentality

Expect the future to be like the past



Utilities Want to Make Money

Encouraged to build more

Cost-of-Service Rates

Plants + Lines + Fuel + People + Other

+

Profit = Rates

FERC Rates Distort the Market

15+% return for pipelines

10+% return for power plants

10+% return for transmission lines

FERC Rates Distort the Market

15+% return for pipelines

10+% return for power plants

10+% return for transmission lines

Increases investment in gas infrastructure

Build Power Plants
Export Power

2 now – 3 more

Build Power Plants
Export Power

2 now – 3 more

4 proposed by IPP's

Build Power Plants Export Power

2 now – 3 more

4 proposed by IPP's

20 new plants proposed in PA

Loophole in CPP

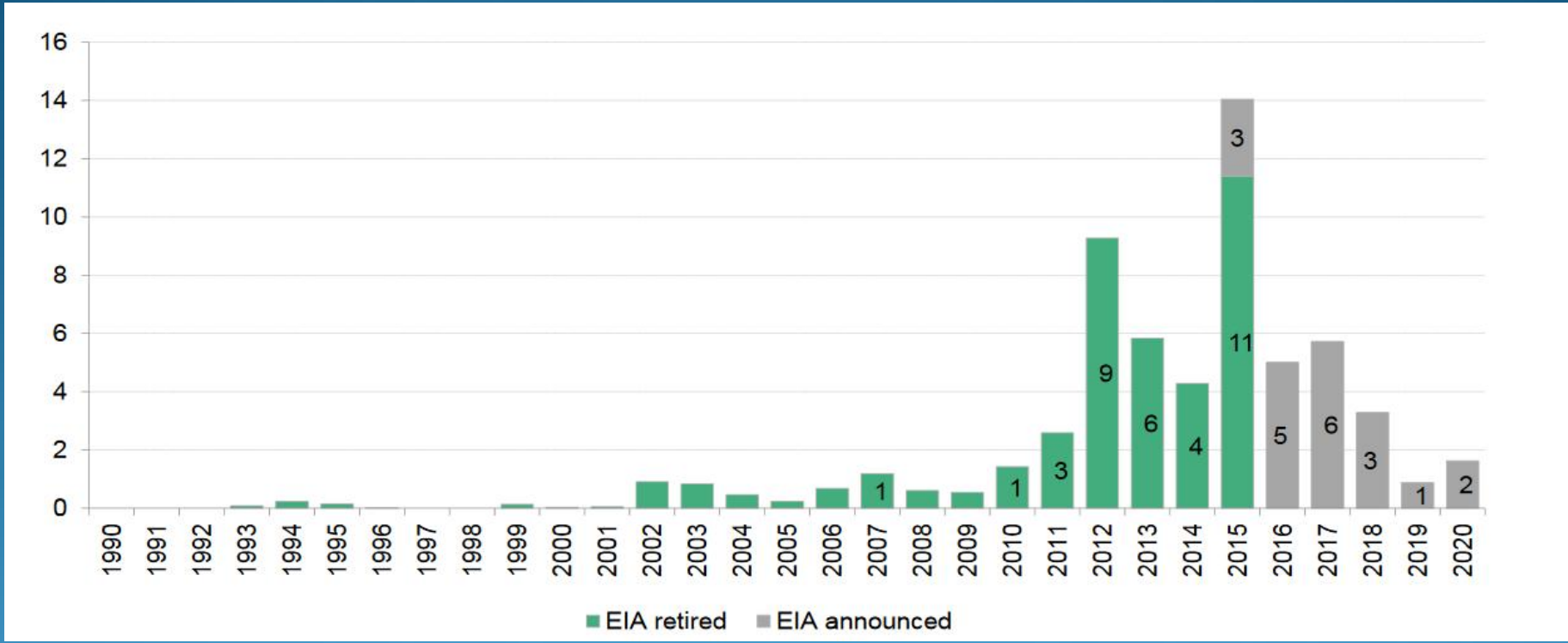
VA - a haven for gas-fired plants

Methane - gas about the same as coal

Greater CO_2 emissions from VA

Clean Power Plan

Mostly Accomplished

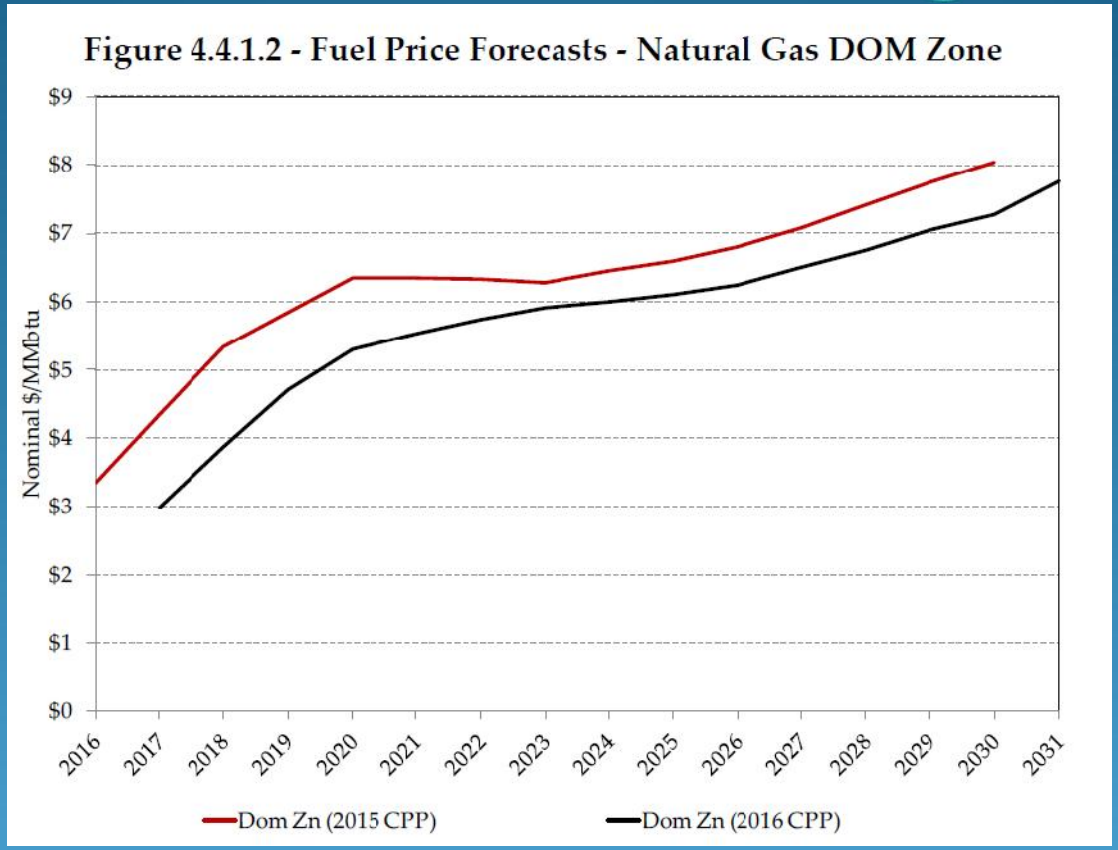


11 GW offline by 2015 12 more plants by 2020

But We have a BIG Problem

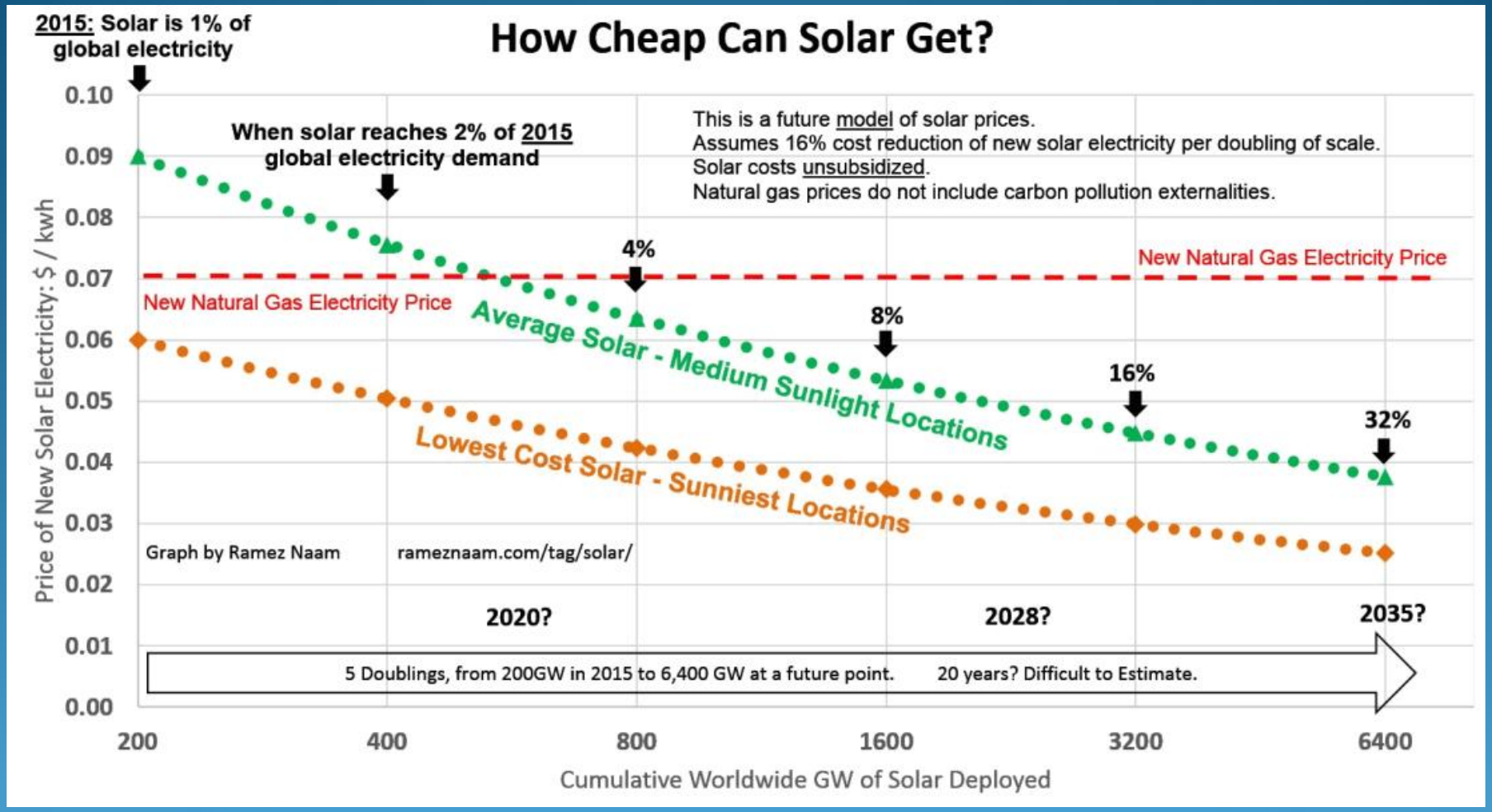
Rush to build gas plants – good for 10 yrs

Gas Prices Going Up

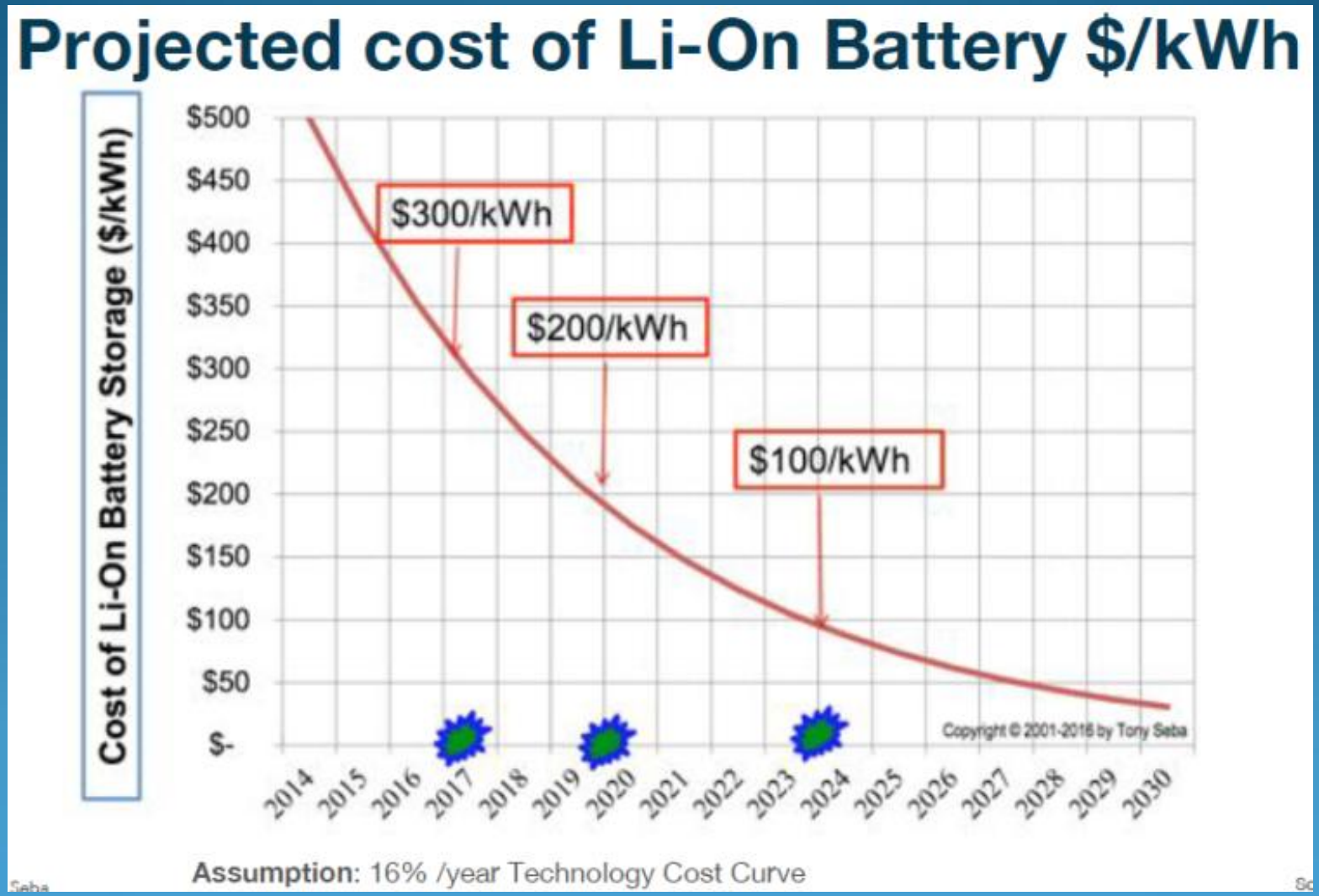


$2 now $6 2025 $8 2030

Solar & Storage Going Down



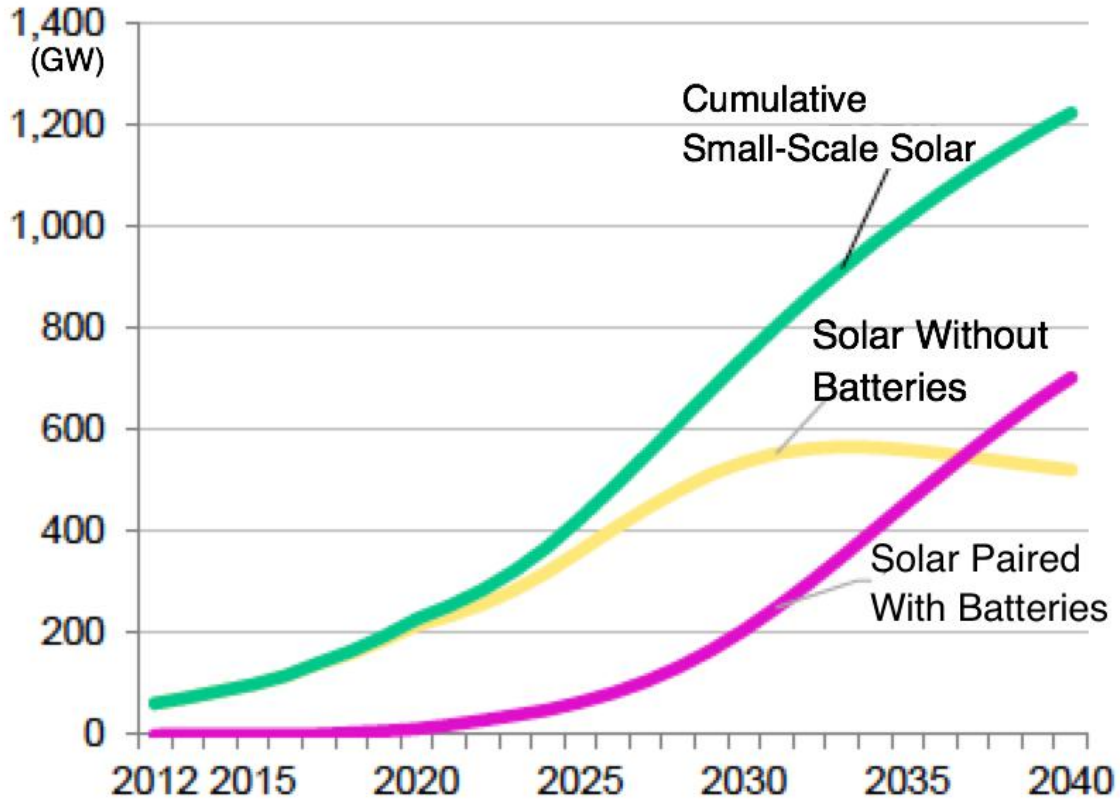
Solar is Dispatchable



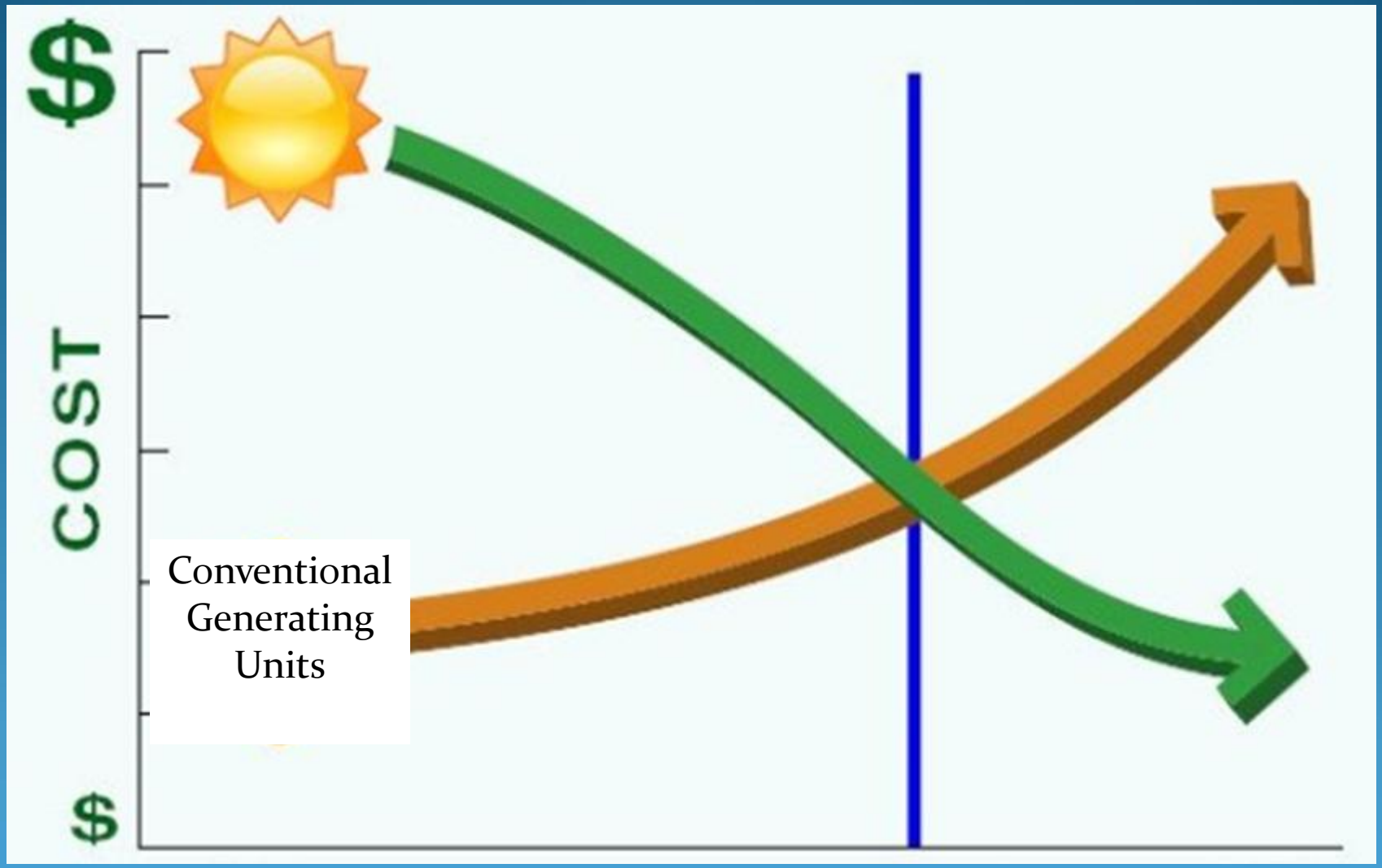
Existing Units Displaced

Here Come the Batteries

Electricity storage will come standard with rooftop solar by the 2030s



Utility Disruption



Is This Possible?

CA – gas-fired plants not profitable

Batteries replacing peakers

Nuclear plants closing

Nuclear subsidies in NY to avoid new gas plants

Stranded Costs

Abrupt Change

Warnings

Utilities with natural gas pipelines could be upended - Bloomberg

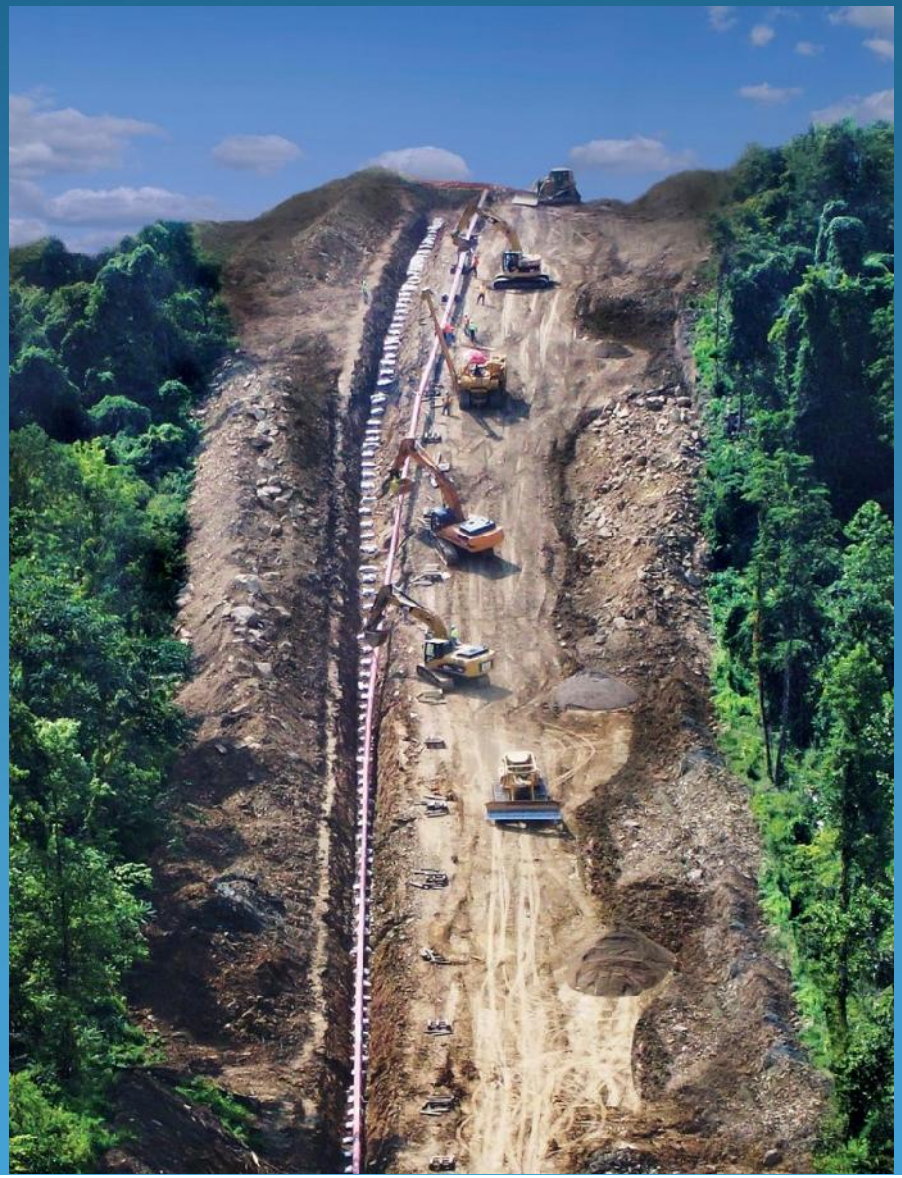
"These utilities are taking a risk that these will be stranded assets . . ."

Jon Wellinghoff

Former Chairman FERC

Who Pays?

What do we do?



Make it about economics

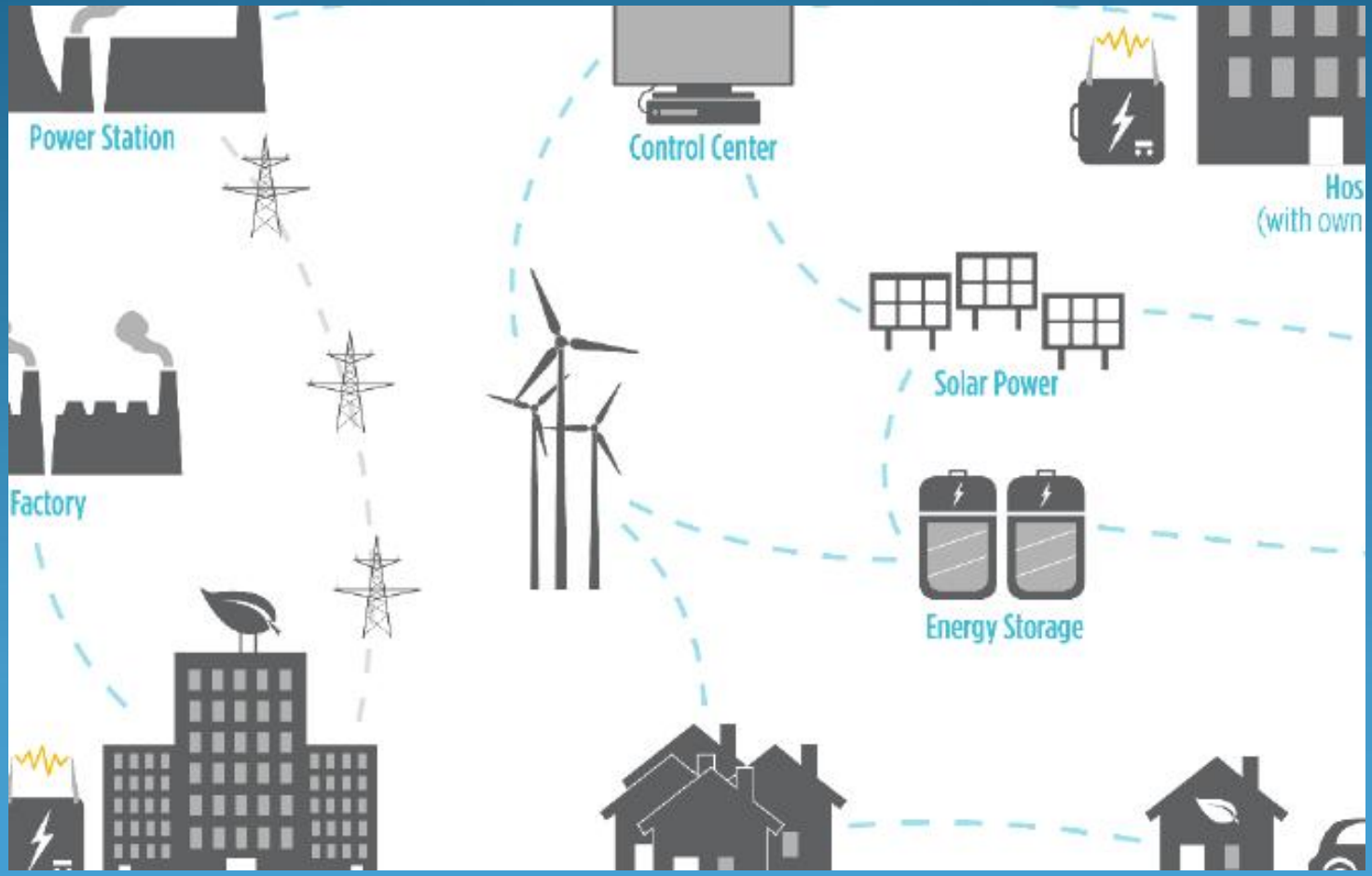
Be for – lower cost existing pipelines, more jobs (EE, solar) & lower rates

Be for – an vital, innovative economy

Be for – avoiding stranded costs

New Rules for Utilities

They prosper by serving you better



Financially Healthy

Without building more

Trade Old for New

They are not the Enemy

Dominion®

DUKE ENERGY®

Piedmont Natural Gas

They Cannot See

We do not curse the blind man who stumbles along the path

Rather than focus on what we do not want

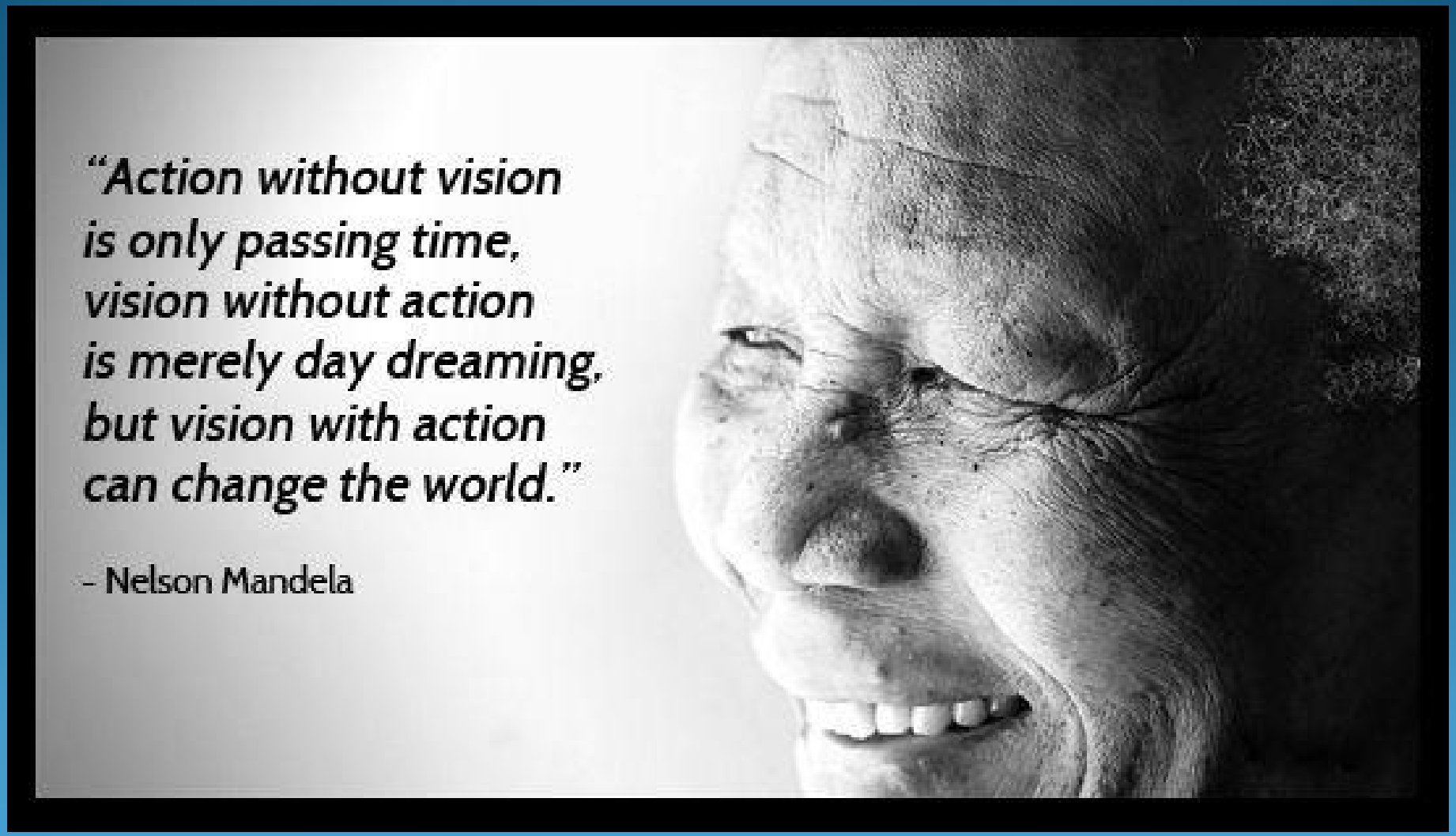
Create the world you want to live in

See it clearly

Know what you do want

Take action
Tell the Story

Put it all together



Thank You!

Thomas Hadwin

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