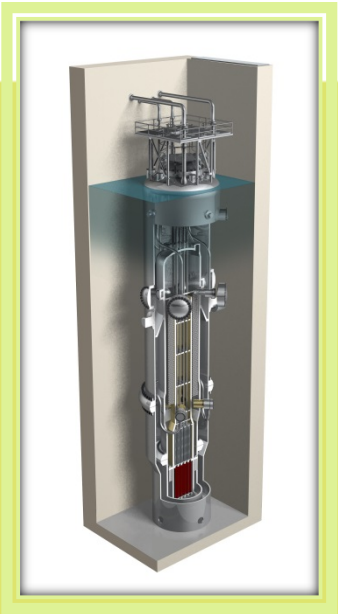
NuScale Plant Market Competitiveness & Financeability



Jay Surina

Chief Financial Officer

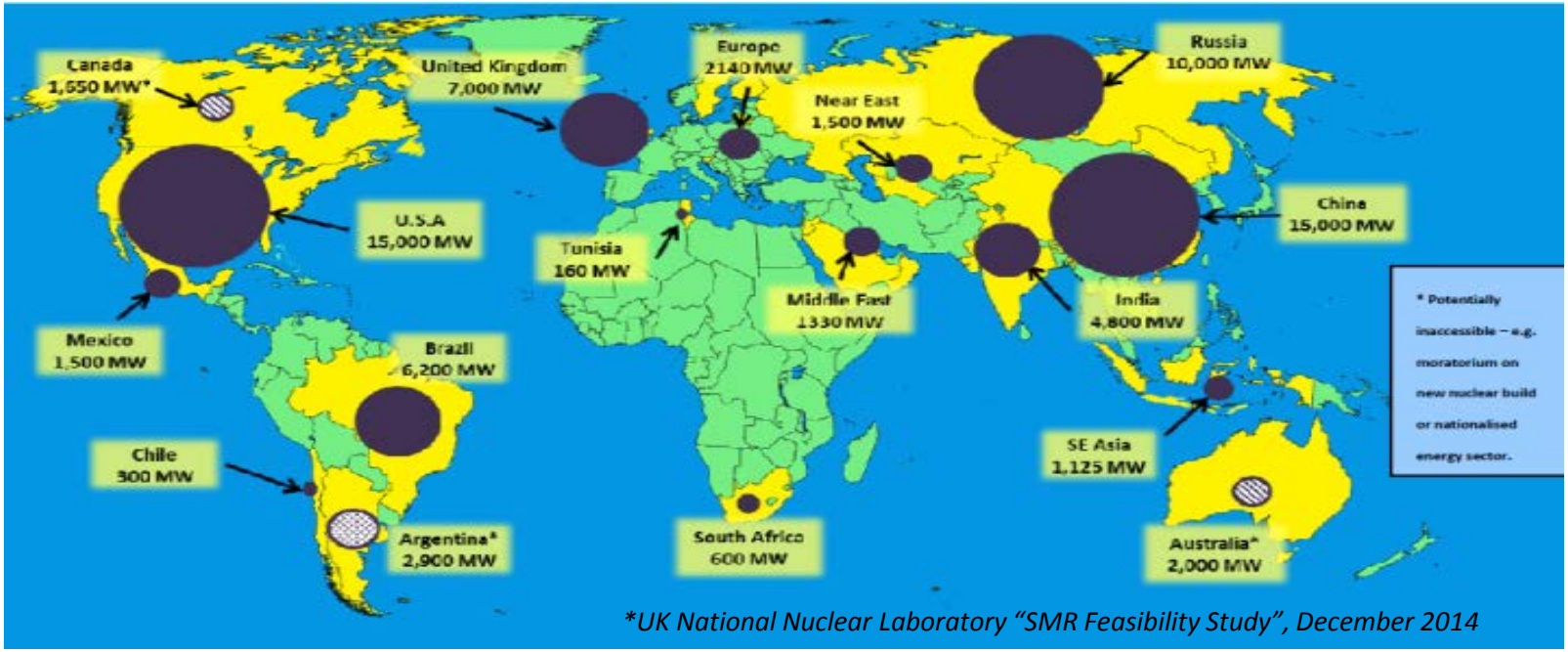
NuScale Exposition

August 20-21, 2015

NuScale Power™

SMR Market Potential

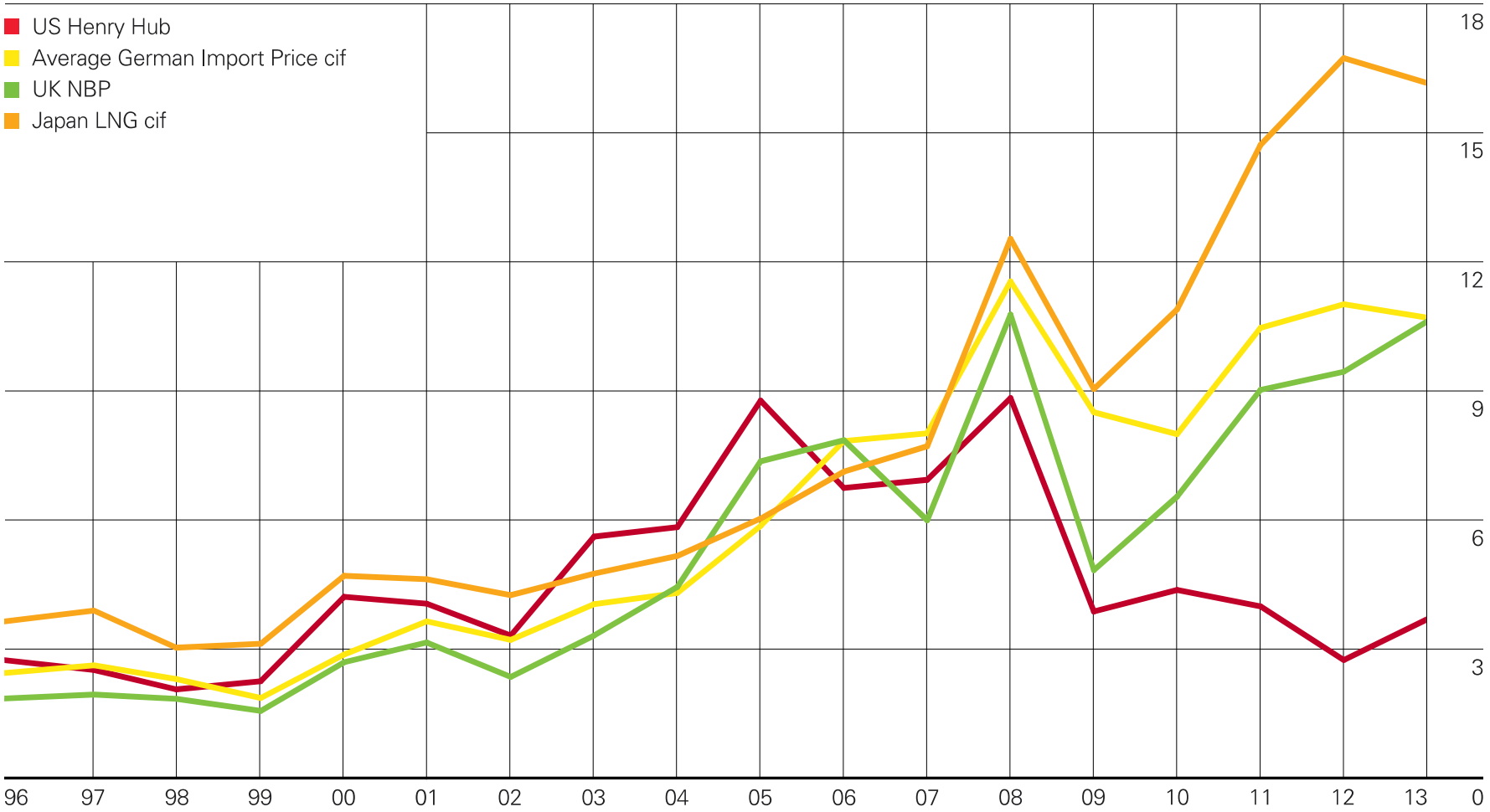
- UK NNL* calculated the potential SMR market to be approximately 65-85GW by 2035, 55-75 GW excluding Russia



**UK National Nuclear Laboratory "SMR Feasibility Study", December 2014*

- This is equivalent to 1100 – 1500 NuScale Power Modules (NPMs)
- At 25% market share, and 10 year deployment timeframe, 28–38 NPM / year
- At 36 NPM / year, approximately 1000 workers dedicated to machining, assembling and testing NPMs

SMR Market Potential



Source: BP Statistical View of World Energy 2014

SMRs & the Clean Power Plan (CPP)

- EPA issued its proposed Clean Power Plan to regulate CO2 emissions from existing power plants under section 111(d) of the Clean Air Act
- The CPP issued varying, state-specific targets; rule is not prescriptive about how to meet the targets
- The CPP is tough on coal plants, the largest and highest rate emitters, and many will have to close
- CPP 2022-2029 “glide path” matches well with NuScale first deployment in 2023
- Base load power will have to come from nuclear power, CCGT or renewables + storage
  - Renewables + storage is currently too expensive to be used for base load demand
  - Utilities will resist becoming overly dependent on natural gas as a fuel source
- 32% reduction in GHG from affected EGUs is ~100 GW of coal which could be replaced by a combination of renewables, energy efficiency and nuclear.
  - 100 GW represents 2000 NuScale Power Modules or 175 570 MWe plants
  - UK NNL forecast for US is 15 GW of SMR deployment by 2035

SMR Competitive Landscape

SMR Designs Under Development

Technology	PWR	HTR	LMR	Thorium
US	**NuScale** **mPower** **W-SMR** **SMR-160 (Holtec)** RADIX	GT-MHR	ARC-100 PRISM (GE)	
China	ACP-100 NHR200	**HTR-PM**		
Russia	**VBER-300** **KLT-40S** ABV BREST-OD-300 RITM-200		**SVBR-100**	
India				
Japan			Toshiba-4S	
South Korea	**SMART**			
Argentina	**CAREM**			

1: *Technologies viewed as less developed and therefore not a significant threat in 2020-2035 time frame*

2: *Countries with indigenous PWR-based SMR technology – assume no sales here*

3: *Despite having indigenous programs, track record of interest in US nuclear technology (AP1000) and current discussion both indicate a market open to US SMR technology*

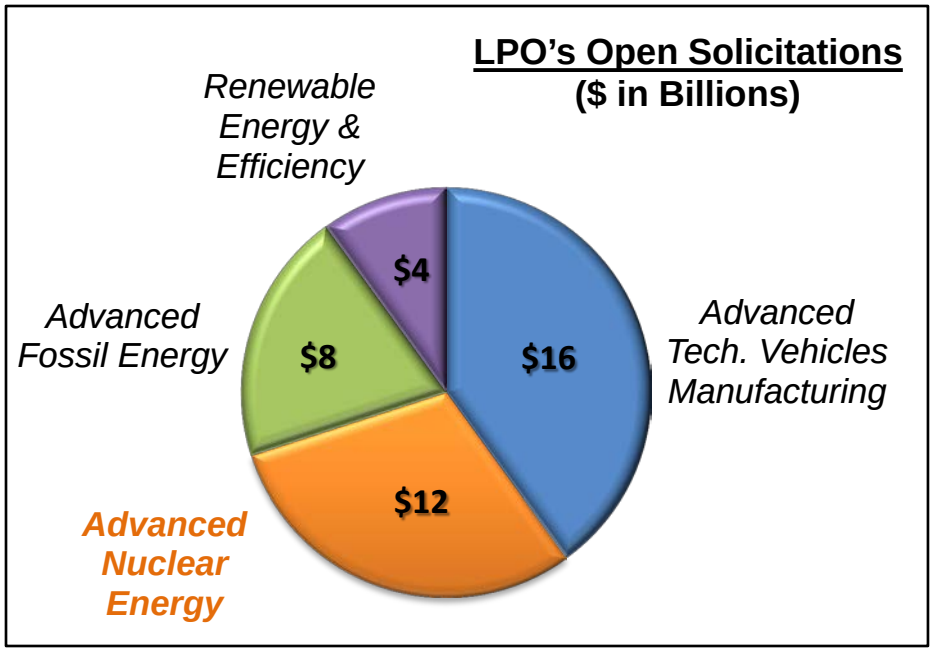
Bold *indicates programs considered most advanced by UxC*

Source: UxC SMR Market Outlook, March 2013:
Notes: Only programs listed as Under Development, Under Construction, Licensing Stage, or Licensed are shown. The Brazil FBNR is considered to be a "conceptual design" and is not represented here. India has several <200MW plants operating but UxC does not consider these to be modular in design.

DOE Loan Guarantees

- DOE's 'Loan Programs Office' (LPO) has **$12 billion in loan guarantee authority available** for Advanced Nuclear Energy, including:
  - **Small modular reactors (i.e. NuScale)**
  - New nuclear reactors
  - Capacity upgrades at existing nuclear plants
  - Uranium enrichment facilities

- Application deadlines on a rolling six-month basis (next deadline is September, 2015)



- Separate from the $12 billion in guarantees available, LPO has already guaranteed $8.3 billion for the **Vogtle project – its first advanced nuclear energy deal – helping to revive construction of nuclear power plants** in the U.S. and around the world. The Vogtle Project is owned by a diverse group of entities:
  - Georgia Power (*Investor owned*)
  - Oglethorpe Power Corporation (*Cooperative*)
  - Municipal Electric Authority of Georgia (*Joint Action Agency*)
  - Dalton Utilities (*Municipal*)

Construction Cost Summary

Overall EPC Overnight Plant Costs

($1,000,000)

ITEM	2014 Dollars
Power Modules (FOAK Cost plus Fee, Transportation, & Site Assembly)	$ 848
Home Office Engineering and Support	$ 144
Site Infrastructure	$ 60
Nuclear Island (RXB, RWB, MCR)	$ 538
Turbine Island (2 buildings with 6 turbines each)	$ 350
Balance of Plant (annex, cooling towers, etc)	$ 225
Distributables (Temp. Bldgs., Field Staff, Const. Equip., etc.)	$ 545
Other Costs	$ 185
Total Overnight Price	**$ 2,895**

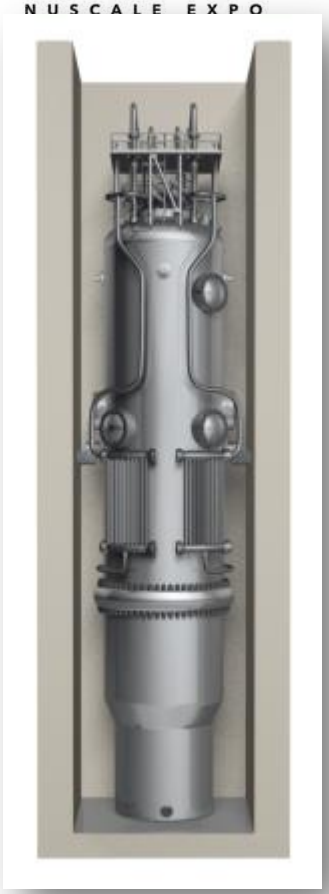
$ 5,078 per kWe net

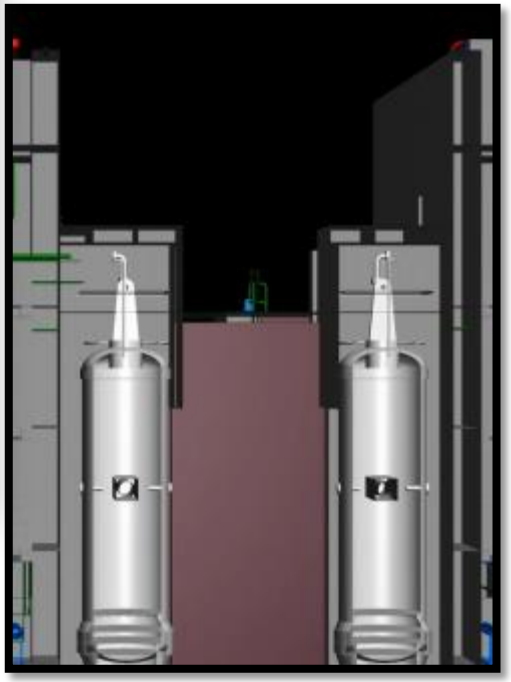
Note: Delivered costs shown are in 2014 $'s.

Plant Cost Estimate Development

- ~10,000 man hour effort over 6 months.
- Detailed equipment lists to individual valves and instruments.
- Takeoffs developed for all piping, duct, wire, excavation, civil/structural materials, and architectural items.
- Total equipment and commodity input over 14k line items.
- All equipment tagged with building, system, unit, and safety classification.
- Updated construction plan with estimate input.
- 84% of equipment pricing based on budgetary quotes.

NuScale Power Module Cost Development

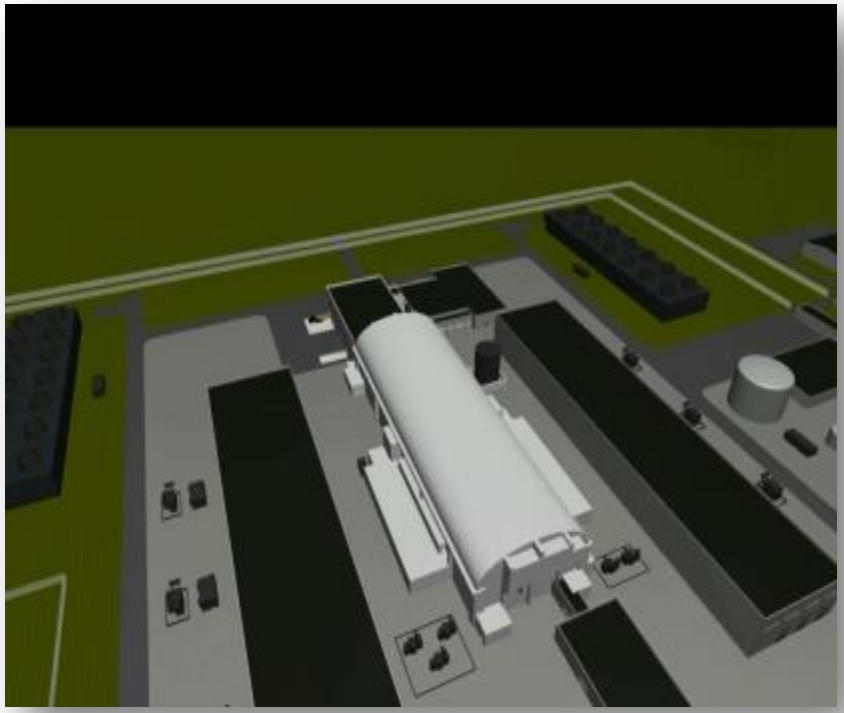




- Module costs estimating cost to fabricate/purchase each individual component.
  - ✓ Over 75 unique components.
  - ✓ Cladding, welding, bolting, and gasket material and labor individually estimated.
  - ✓ Vendor quotes obtained for forgings, valves, instruments, pressurizer heaters.
- Machining, fabrication, assembly performed in a dedicated facility.
- Fabrication shop direct/indirect labor informed by a large U.S. nuclear fabricator.
- Monte Carlo analysis performed for contingency to achieve P80 confidence.

Plant Cost Estimate Assumptions

- Generic southeastern USA site.
- Labor hours based on Fluor standard unit rates with productivity adjustments.
- Labor rates based on existing Fluor project.
- Indirect costs based on staffing plan, construction schedule, and temporary facility plan. Bottoms up indirect cost estimate.
- Schedule based on 51 months mobilization to mechanical completion. 28.5 month critical path - first safety concrete to mechanical completion.
- Class 4 estimate per AACE with an expected accuracy range of +35%/-10%.
- Owners cost, estimated at $300 mm, not included in EPC estimate. Estimates for transmission, admin building, licensing, etc. carried in LCOE costs.

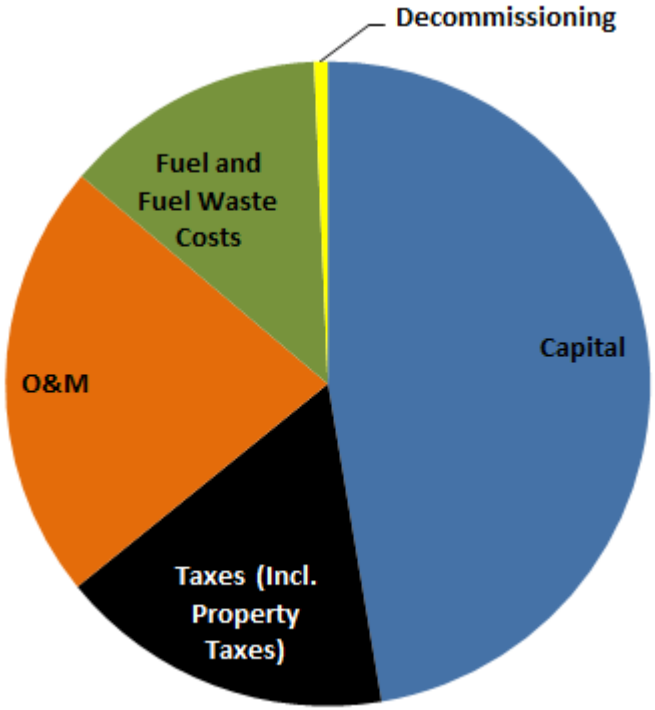


NuScale Levelized Cost of Electricity Estimates

NuScale LCOE results of $98-$108/MWhr (2015 $'s)

Key Assumptions:

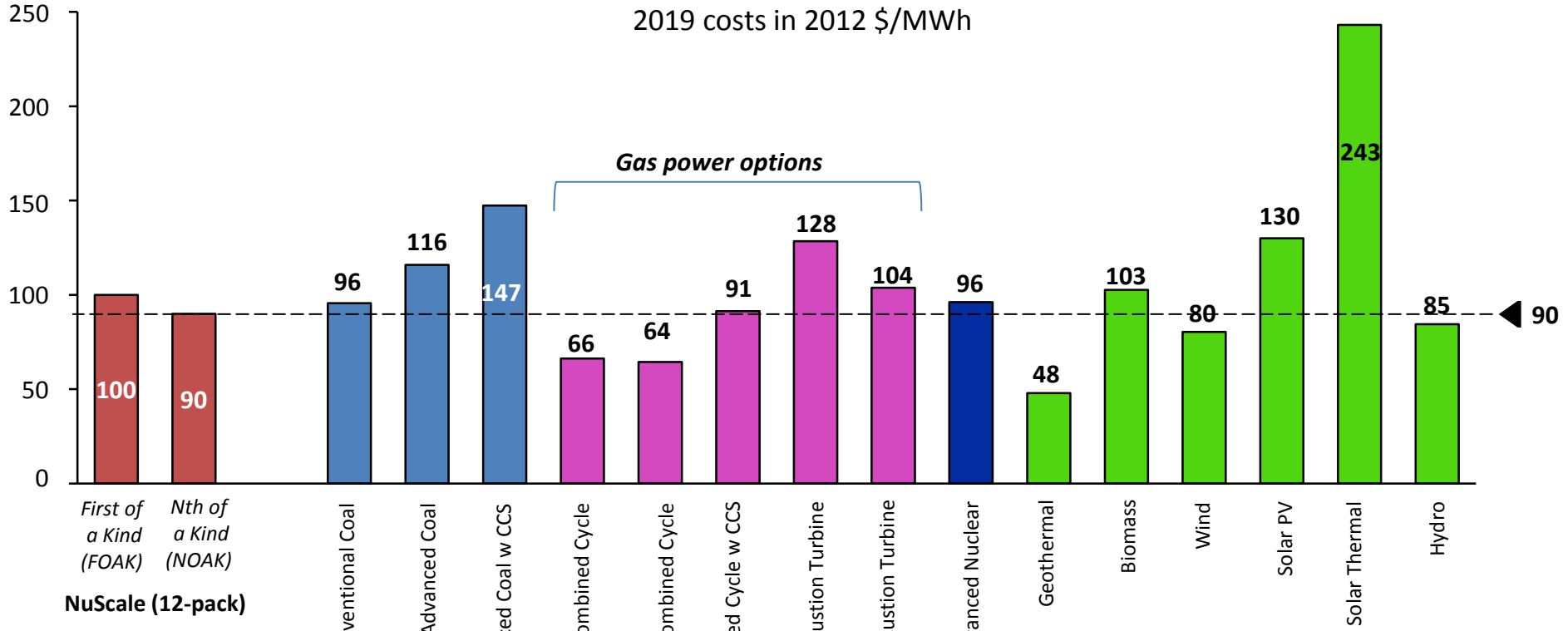
- Financing is 55% debt (@5.5%) and 45% equity (@10.0%).
- Modeled as a 40 year project life, but the plant is designed for 60 years
- Excludes owner's costs such as:
  - HR and management infrastructure, central office
  - COLA, permits, NRC and ITAAC inspections, and legal fees
  - Switchyard
  - Owner's project development costs
  - Owner's engineering services (post-COLA)
  - Owner contingency
- Including an estimate of owners costs would add ~ $6/MWhr



NuScale LCOE in North America

Estimated Average US Levelized Cost of New Generation Resources

2019 costs in 2012 $/MWh



Assumptions for EIA and NuScale (12-Pack):
WACC of 6.5%; 30 yr cost recovery period.

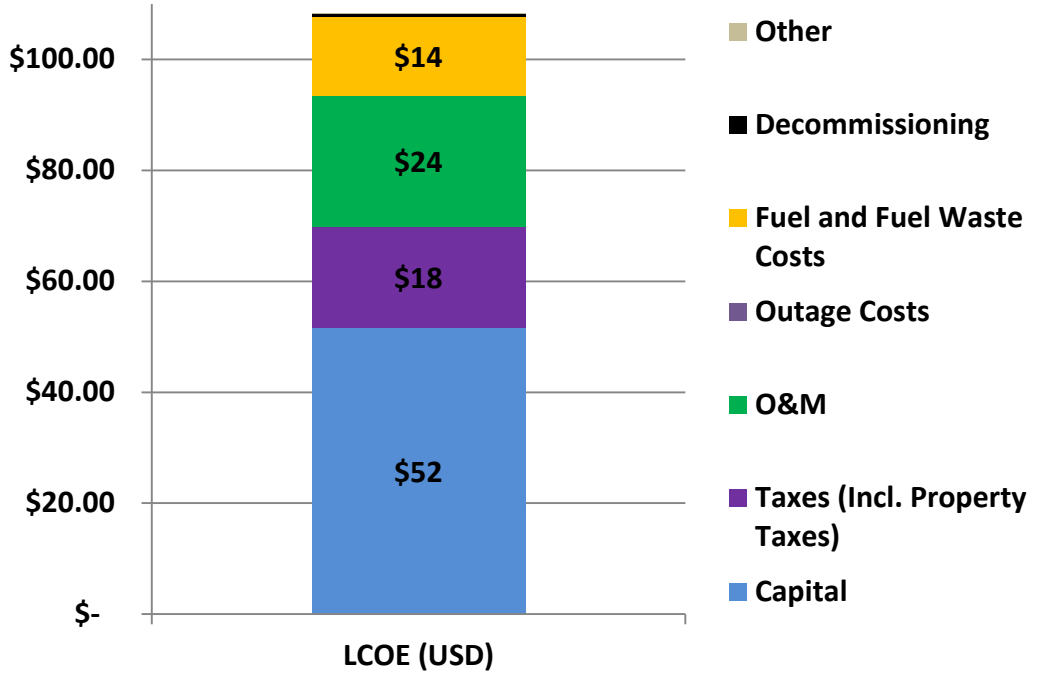
Source: U.S. Energy Information Administration, Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2014, April 2014, *except NuScale (12-pack); NuScale LCOE Model*

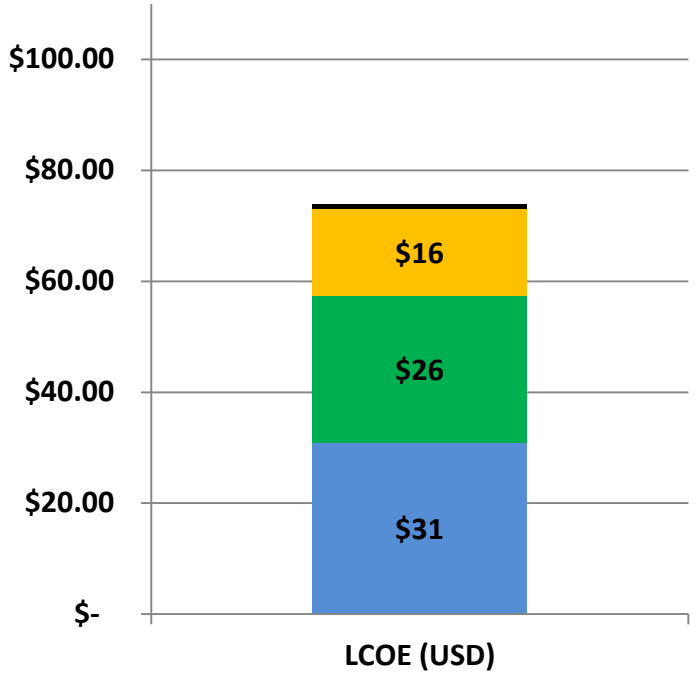
NuScale FOAK (12-Pack) LCOE of $100/MWh includes owner's cost of $5.10/MWh. NuScale NOAK (12-Pack) LCOE of $90/MWh includes Owner's Cost of $5.10/MWh. For all other technologies, EIA included transmission investment from $1.10/MWh (Advanced Nuclear) to $6.00/MWh (Solar Thermal). NuScale included $1.10/MWh for transmission investment in the FOAK and NOAK LCOE values.

Note: EIA projects 2019 Henry Hub spot natural gas prices of approx.$4.70/mmbtu (2012 Dollars) (Annual Energy Outlook 2014)

LCOE Breakdown

Levelized Cost in 2015 US Dollars





FOAK with Regulated Utility Financing (IOU)

- 55% debt at 5.5%, 45% equity at 10%

$ 108 USD

FOAK with Municipal Financing

- 100% debt at 3.5%, no equity

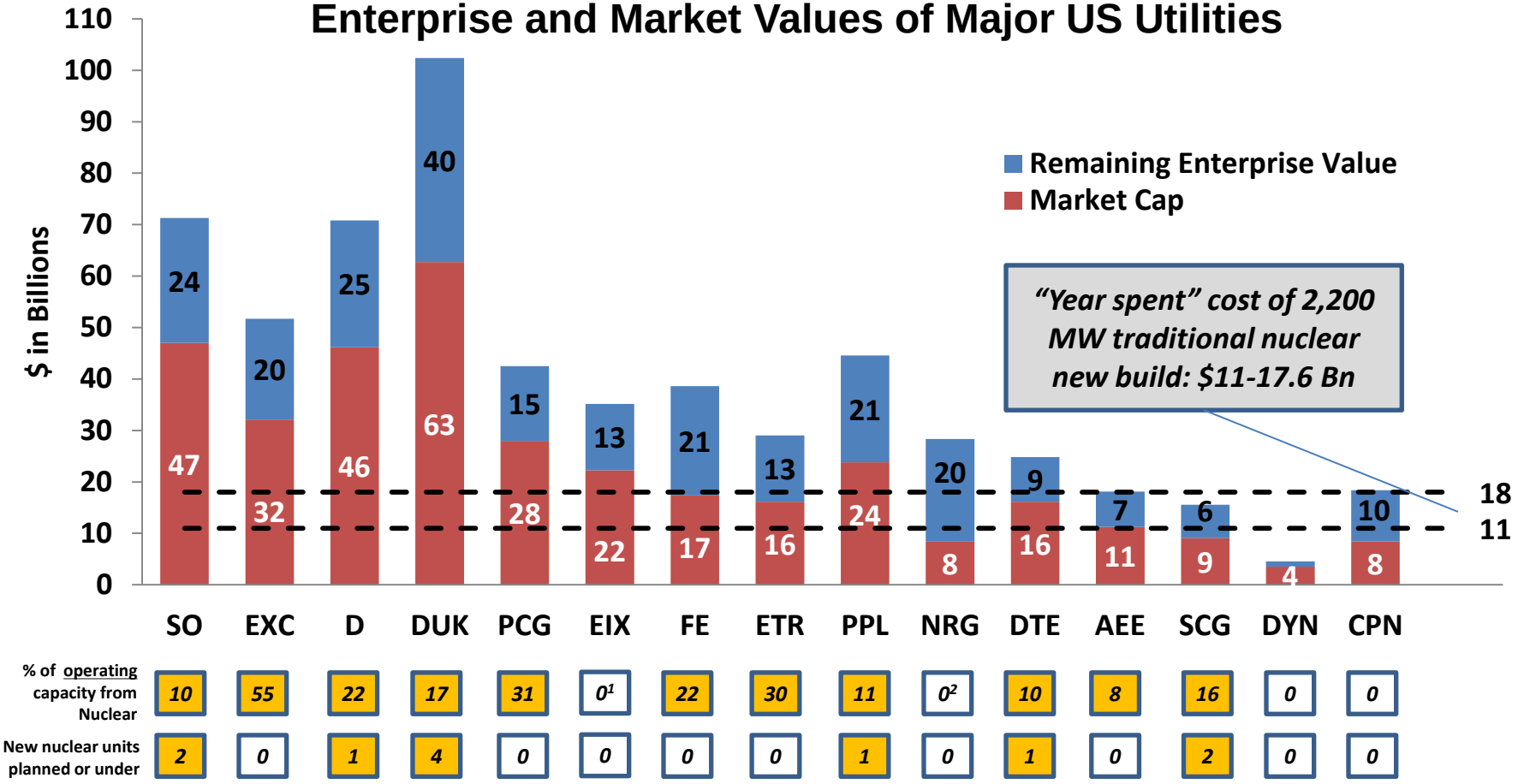
$ 74 USD

Note: Capital costs reflect the Fluor SE estimate completed in 2014.

Reduced Financial Risks

NUSCALE EXPO 2015

Enterprise and Market Values of Major US Utilities



	SO	EXC	D	DUK	PCG	EIX	FE	ETR	PPL	NRG	DTE	AEE	SCG	DYN	CPN
% of operating capacity from Nuclear	10	55	22	17	31	0[1]	22	30	11	0[2]	10	8	16	0	0
New nuclear units planned or under construction	2	0	1	4	0	0	0	0	1	0	1	0	2	0	0

Source: Capital IQ; data for 1/23/2015; Platts; AlixPartners and NuScale Analysis

Note: SO Southern; EXC Exelon; D Dominion; DUK Duke; PCG PG&E Corp.; EIX Edison Int'l; FE FirstEnergy; ETR Entergy; PPL PPL Corp.; NRG NRG Energy; DTE DTE Energy; AEE Ameren; SCG Scana Corp; DYN Dynegy; CPN Calpine; nuclear capacity data based on plants shown as on operating status in Platts ; "Year spent" estimate for traditional nuclear plant based on JP Morgan and other sources

1 *Edison, through Southern California Edison owns the San Onofre, CA nuclear plant. All units have been permanently retired*

2 *As part of a joint venture with Austin Energy and CPS, NRG operators 4 nuclear units at the South Texas plant generating 2.8 GW of capacity*

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