



# NAPCO meeting - Seattle

**Re-regulation of electricity markets and  
thirst for yield**

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## US utilities and power: Top themes (1)

- Regulated electric/gas utilities trading at 19.5x '21E EPS on average
  - ~6% EPS/DPS annual growth prospects through 2020 though:
    - Electric transmission capex is slowing, renewable new build is peaking in 2020, and grid modernization capex is too low to matter;
    - Electric sales volumes (ex weather) are weakening, especially in the Midwest;
    - The vast majority of utilities should become federal tax cash payers at a full rate in 2020/2021 = capex will need equity funding.
  - Unprecedented wide spread in valuation multiples within the group, despite a recent “junk rally”, even when we exclude California utilities:
    - Investors are paying up for most consistent EPS performers/strongest growth pipelines, such as those of WEC, XEL, CMS or ES.
    - WEC trades at 22.8x '21E EPS (based on FactSet consensus) while CNP at 15.9x.
  - Value names continue to struggle with two exceptions – ETR and SO.
- Regulated water utilities trading at 30.6x '21E EPS on average
  - Water utilities have sharply outperformed the XLU YTD, largely due to foreign fund inflows, especially cash outflows from UK water stocks and ESG-related flows.

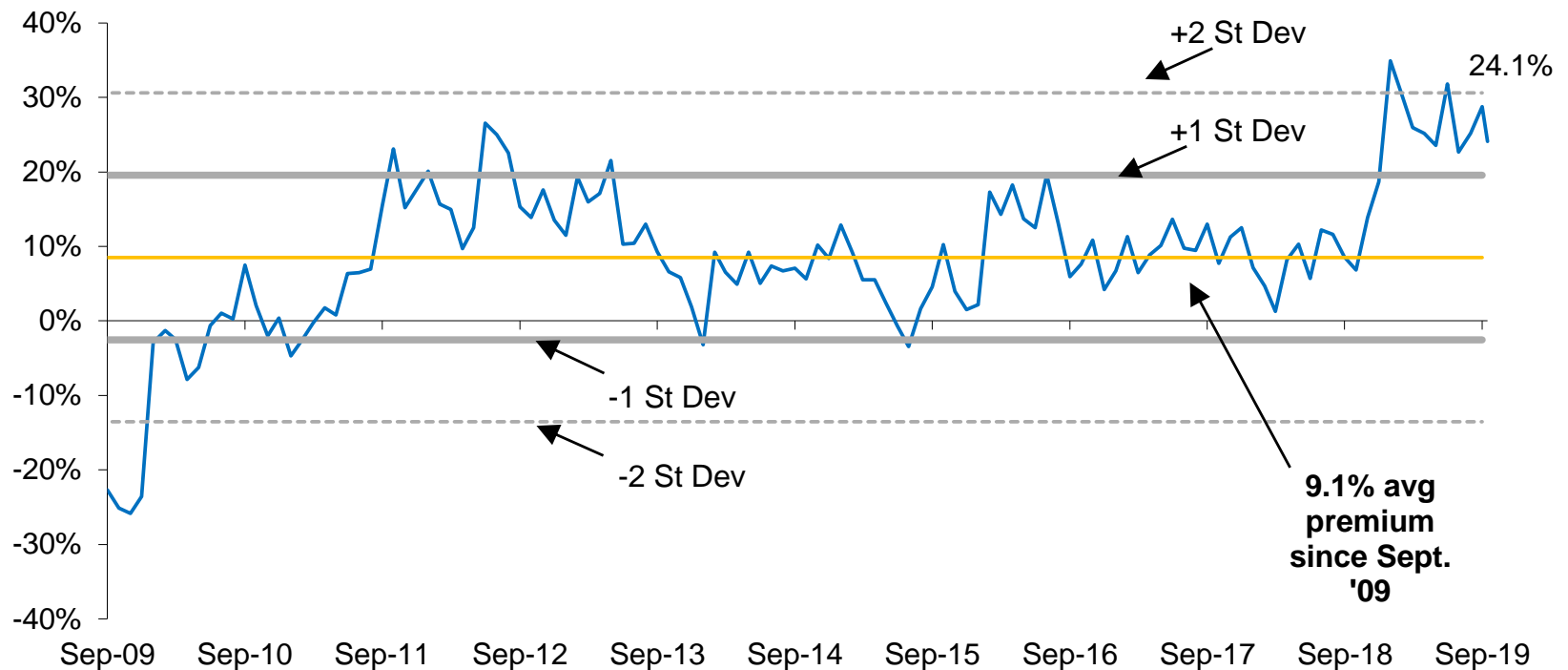
## US utilities and power: Top themes (2)

- Diversified utilities/Renewable power developers:
  - Onshore wind and solar projects have become mainstream = sharply lower margins, even for established developers.
    - Unlevered IRRs for onshore wind projects are as low as 5%, with the majority of that return being generated after the expiration of the current PPA (terminal value). Leverage (up to 90%) is used to achieve levered returns of 10-11%.
    - Best to play onshore wind/PV solar through regulated utilities in the Midwest.
  - Offshore wind offers meaningfully higher returns, but public investors are concerned about regulatory/construction delays:
    - Unlevered/levered IRRs of ~8%/15% over the duration of existing contracts.
  - Size/execution track record matter in renewable power development:
    - NEE consistently offsets weak output from its onshore wind farms, while AGR consistently misses numbers due to this issue. Hence the 19% '21 PE differential.
    - AES's geographical spread more than offsets impressive solar/wind/battery growth.
- Power producers/Electric retailers:
  - Northeastern power/capacity markets are struggling and so are EXC and PEG.
  - The volatility in the TX power market is back, at long last, but VST/NRG keep trading at unprecedented 20%/17% '21E FCF yields.

## Power producers/Electric retailers – Survival strategies

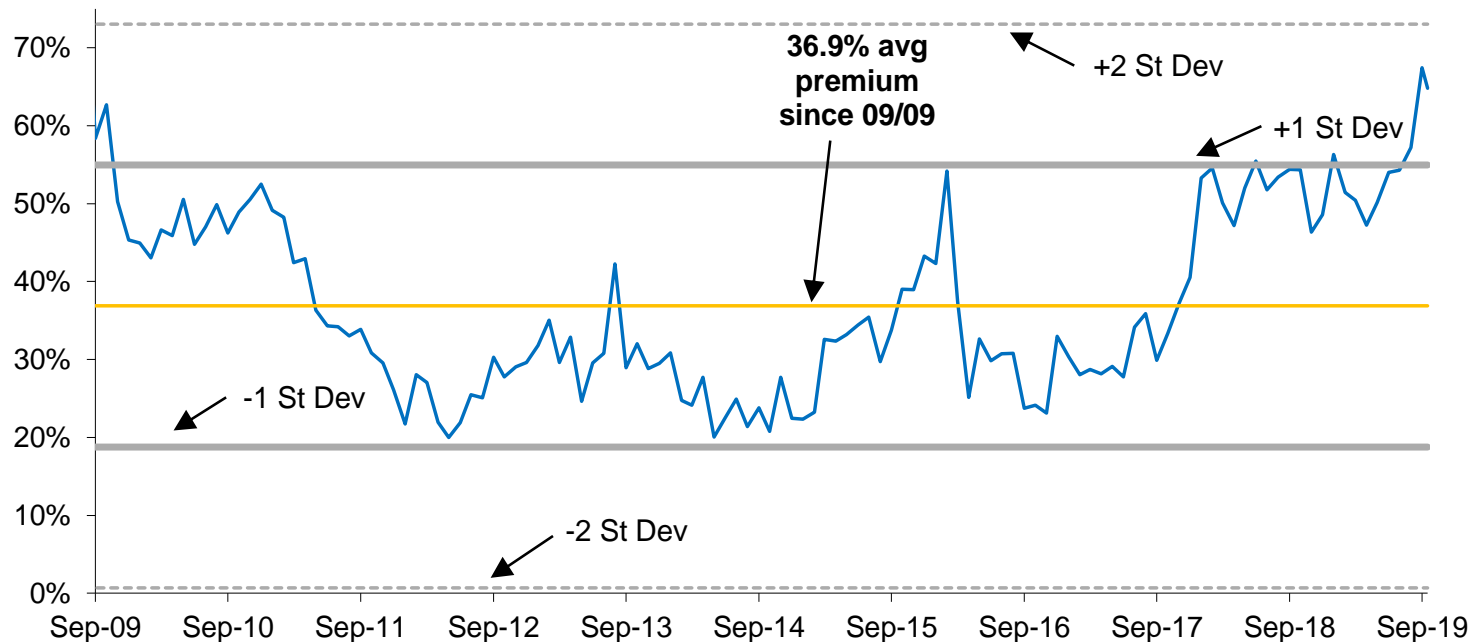
- EXC/PEG/FE - state subsidies for nuclear plants in IL/NY/NJ/OH:
  - Legal challenges to those subsidies have been unsuccessful, though given ongoing declines in power prices in the Northeast/PJM, the subsidies may soon not be enough to keep the nukes running.
  - A European-like patchwork of nuclear subsidies seems likely to us.
  - FERC should try to mitigate the impact of the subsidies on capacity markets, but first needs a quorum.
    - IL already considering an exit from the PJM capacity market.
- VST – Shutdowns of uneconomic plants, operational efficiencies from Dynegy's gas plants. Growth in retail books
  - VST is the biggest beneficiary of the recent volatility in ERCOT power prices. Yet, forward power curves remain heavily backwardated in TX beyond 2020.
  - VST's gas plants in PJM and New England are struggling, with more pressure likely.
  - Despite recent acquisitions of retail books, VST remains heavily long power, especially in PJM.
- NRG – Generation assets kept just to support electric retail operations
  - NRG is already 2GW short power in ERCOT, but does not want own more power plants in TX because the plants carry a large technology risk.
  - Instead, NRG is heading its short position through 10-year solar PPAs.

Regulated electrics now trade at a 24.1% FY2 PE premium vs the S&P 500, just below the +2 St Dev premium over last decade



Source: FactSet, Macquarie Capital (USA), September 2019

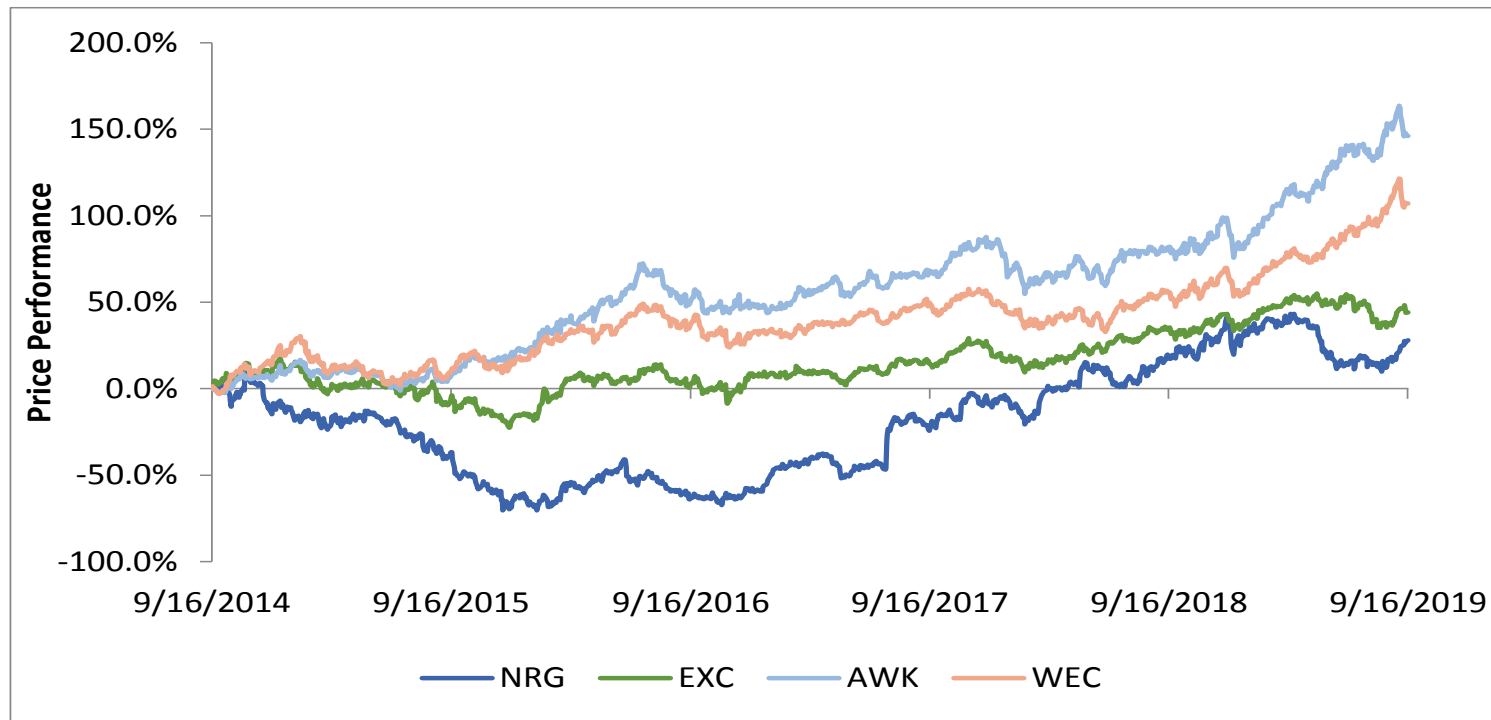
## Water vs electric utilities – FY2 relative PE well above historical average



Source: FactSet, Macquarie Capital (USA), September 2019

- Water utilities (AWK, WTR, CWT, and AWR) are currently trading at a 64.8% '20E PE premium to regulated electric utilities, versus the 36.9% average FY2 premium over the past decade.

## Investors have flocked to expensive regulated utilities, ignoring power producers

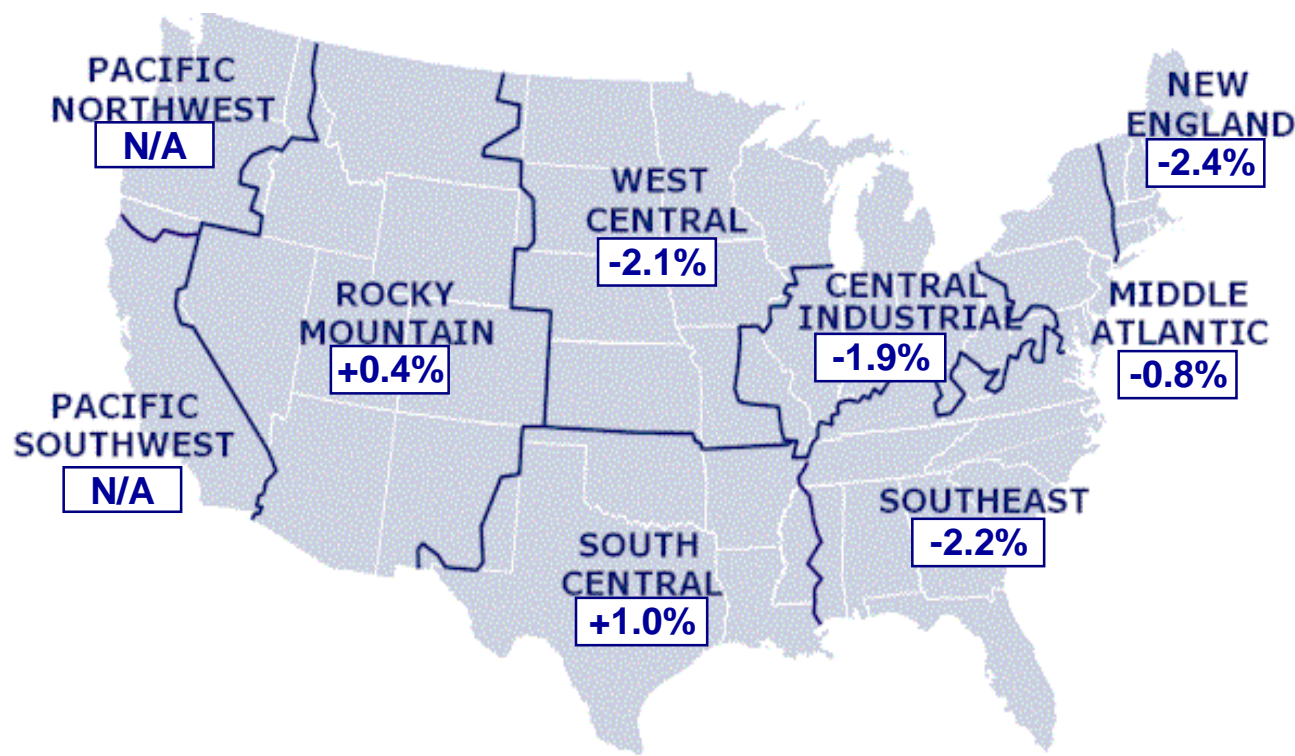


Source: Company data, Macquarie Capital (USA), September 2019

- AWK and WEC stock prices are up 146% and 107%, respectively, over the past five years while NRG and EXC have increased only 27% and 44%, respectively.



## YoY declines in electric sales through 2Q19, especially in the Midwest



Source: Company data, Macquarie Capital (USA), September 2019



## TX load continues to grow at 2%+ annually, supply not keeping up with growth

	<b>7/31/2019</b>	<b>8/7/2019</b>	<b>8/14/2019</b>	<b>8/21/2019</b>	<b>8/28/2019</b>	<b>9/4/2019</b>	<b>9/11/2019</b>
ERCOT North 2019 on-peak	\$ 29.37	\$ 36.06	\$ 43.00	\$ 51.49	\$ 48.85	\$ 49.45	\$ 51.04
ERCOT North 2020 on-peak	\$ 37.83	\$ 40.39	\$ 45.15	\$ 45.79	\$ 45.81	\$ 48.66	\$ 49.34
ERCOT North 2021 on-peak	\$ 35.00	\$ 36.52	\$ 36.58	\$ 38.81	\$ 38.92	\$ 40.55	\$ 39.66
ERCOT North 2019 ATC	\$ 25.63	\$ 27.84	\$ 30.79	\$ 33.98	\$ 33.21	\$ 33.66	\$ 34.78
ERCOT North 2020 ATC	\$ 27.97	\$ 29.09	\$ 31.54	\$ 31.94	\$ 31.94	\$ 33.56	\$ 34.29
ERCOT North 2021 ATC	\$ 26.33	\$ 27.01	\$ 26.87	\$ 27.91	\$ 28.03	\$ 29.04	\$ 28.59

Source: Macquarie Energy, Macquarie Capital (USA), September 2019

- While forward power curves remain backwardated, late summer volatility has boosted prices significantly from lows at the end of July.
- The increase in '20-'21 should support earnings for net long generators VST/EXC.

## US utilities and power: Top picks

- Regulated electric utilities:
  - **ETR**: 5%+ EPS grower (supported by strong load growth on the Gulf Coast) trading at 2.5% '21E PE discount to peers; secured decommissioning agreements for all merchant nuclear plants.
- Regulated water utilities:
  - **AWK**: Fastest grower among water utilities, supported by significant foreign fund inflows.
- Diversified electric utilities:
  - **AES**: Solar/battery growth story at 10.3x '21E PE, incremental support from sell-downs of equity stakes in operating contracted renewables.
- Power producers/retail providers:
  - **NRG**: Growing retail volumes/margins, though the recent volatility in ERCOT power prices should not be helpful.
  - **VST**: Biggest beneficiary of recent rally in ERCOT power prices, though weakening PJM/NEPOOL spark spreads are not helping.

## US utilities and power: Least favorite

- Electric utilities:
  - **PPL:** Unjustified 45% premium in its UK business vs National Grid's on '21 **[E]** EV/RAB; increased concerns about its dividend sustainability beyond 2020.
  - **DUK:** At best, 5% EPS grower backed by low-quality earnings; ongoing dispute over coal ash spending in NC.
- Diversified utilities:
  - **NEE:** Onshore wind power development business running out of growth prospects; yet NEE keeps trading at industry-high valuations (23x '20E EPS) while chasing after regulated utility deals at PE multiples 2x higher than currently observable PEs.

## Comp sheet – Regulated and Diversified utilities

### Regulated utilities

Company name	Ticker	Rating	Price (US\$)		Mkt cap US\$m	Dividend Yield	TSR 12m	EPS - 2020E		EPS - 2021E		PE	
			13-Sep-19	Target				Macq	Cons.	Macq	Cons.	2020E	2021E
<b>American Electric Power</b>	<b>AEP</b>	<b>Outperform</b>	<b>91.54</b>	<b>92.50</b>	<b>45,202</b>	<b>3.0%</b>	<b>4.0%</b>	<b>4.41</b>	<b>4.41</b>	<b>4.68</b>	<b>4.68</b>	<b>20.8</b>	<b>19.5</b>
CMS Energy	CMS	Neutral	61.27	58.00	17,388	2.5%	-2.8%	2.67	2.67	2.86	2.87	22.9	21.4
Centerpoint Energy	CNP	Neutral	29.85	29.50	14,991	3.9%	2.7%	1.78	1.77	1.88	1.88	16.8	15.9
Dominion Resources	D	Neutral	78.52	79.50	47,033	4.7%	5.9%	4.40	4.39	4.64	4.63	17.9	16.9
<b>DTE Energy</b>	<b>DTE</b>	<b>Outperform</b>	<b>128.43</b>	<b>137.50</b>	<b>23,541</b>	<b>2.9%</b>	<b>10.0%</b>	<b>6.61</b>	<b>6.58</b>	<b>7.02</b>	<b>7.06</b>	<b>19.4</b>	<b>18.2</b>
Duke Energy	DUK	Neutral	93.90	92.50	68,416	4.0%	2.5%	5.19	5.17	5.40	5.42	18.1	17.4
<b>Edison International</b>	<b>EIX</b>	<b>Outperform</b>	<b>71.93</b>	<b>79.00</b>	<b>23,521</b>	<b>3.4%</b>	<b>13.2%</b>	<b>4.67</b>	<b>4.54</b>	<b>4.78</b>	<b>4.70</b>	<b>15.4</b>	<b>15.1</b>
<b>Eversource Energy</b>	<b>ES</b>	<b>Outperform</b>	<b>82.38</b>	<b>80.00</b>	<b>26,658</b>	<b>2.6%</b>	<b>-0.3%</b>	<b>3.65</b>	<b>3.65</b>	<b>3.86</b>	<b>3.85</b>	<b>22.6</b>	<b>21.3</b>
<b>Entergy</b>	<b>ETR</b>	<b>Outperform</b>	<b>113.52</b>	<b>111.00</b>	<b>22,571</b>	<b>3.2%</b>	<b>1.0%</b>	<b>5.60</b>	<b>5.58</b>	<b>5.97</b>	<b>5.94</b>	<b>20.3</b>	<b>19.0</b>
<b>FirstEnergy</b>	<b>FE</b>	<b>Outperform</b>	<b>47.37</b>	<b>47.00</b>	<b>25,579</b>	<b>3.2%</b>	<b>2.4%</b>	<b>2.50</b>	<b>2.48</b>	<b>2.65</b>	<b>2.64</b>	<b>18.9</b>	<b>17.9</b>
Alliant Energy	LNT	Neutral	51.65	52.00	12,268	2.7%	3.4%	2.43	2.43	2.57	2.54	21.3	20.1
PPL Corp	PPL	Underperform	30.88	27.00	22,303	5.3%	-7.2%	2.51	2.52	2.35	2.48	12.3	13.1
<b>Southern Company</b>	<b>SO</b>	<b>Outperform</b>	<b>60.13</b>	<b>58.00</b>	<b>62,850</b>	<b>4.1%</b>	<b>0.5%</b>	<b>3.15</b>	<b>3.16</b>	<b>3.27</b>	<b>3.27</b>	<b>19.1</b>	<b>18.4</b>
Xcel Energy	XEL	Neutral	62.61	60.00	32,245	2.6%	-1.6%	2.80	2.78	2.97	2.97	22.3	21.0
<b>Average excl. CNP, EIX and PPL</b>						<b>3.2%</b>						<b>20.4</b>	<b>19.5</b>

<b>American Water Works</b>	<b>AWK</b>	<b>Outperform</b>	<b>121.22</b>	<b>121.00</b>	<b>21,899</b>	<b>1.6%</b>	<b>1.4%</b>	<b>3.93</b>	<b>3.90</b>	<b>4.28</b>	<b>4.24</b>	<b>30.8</b>	<b>28.3</b>
American States Water	AWR	Neutral	90.55	74.00	3,335	1.3%	-17.0%	2.32	2.20	2.45	2.33	39.0	37.0
California Water	CWT	Neutral	54.10	49.00	2,604	1.5%	-8.0%	1.58	1.59	1.75	1.72	34.2	31.0
Aqua America	WTR	Neutral	43.57	41.00	9,401	2.1%	-3.8%	1.54	1.58	1.68	1.67	28.4	26.0
<b>Average</b>						<b>1.6%</b>						<b>33.1</b>	<b>30.6</b>

### Diversified utilities

Company name	Ticker	Rating	Price (US\$)		Mkt cap US\$m	Dividend Yield	TSR 12m	EPS - 2020E		EPS - 2021E		PE	
			13-Sep-19	Target				Macq	Cons.	Macq	Cons.	2020E	2021E
Avangrid	AGR	Neutral	50.81	50.00	15,701	3.5%	1.9%	2.60	2.49	2.81	2.71	19.6	18.7
<b>AES Corp</b>	<b>AES</b>	<b>Outperform</b>	<b>15.79</b>	<b>19.50</b>	<b>10,482</b>	<b>3.5%</b>	<b>27.0%</b>	<b>1.45</b>	<b>1.44</b>	<b>1.54</b>	<b>1.55</b>	<b>10.9</b>	<b>10.3</b>
<b>Exelon</b>	<b>EXC</b>	<b>Outperform</b>	<b>47.27</b>	<b>52.00</b>	<b>45,927</b>	<b>3.1%</b>	<b>13.1%</b>	<b>3.06</b>	<b>3.09</b>	<b>3.13</b>	<b>3.00</b>	<b>15.5</b>	<b>15.1</b>
NextEra Energy	NEE	Neutral	218.49	198.00	106,787	2.3%	-7.1%	9.09	9.08	9.90	9.83	24.1	22.2
<b>Public Service Enterprise</b>	<b>PEG</b>	<b>Outperform</b>	<b>60.80</b>	<b>62.00</b>	<b>30,743</b>	<b>3.1%</b>	<b>5.1%</b>	<b>3.40</b>	<b>3.42</b>	<b>3.46</b>	<b>3.49</b>	<b>17.9</b>	<b>17.6</b>
<b>Average (ex-AES)</b>						<b>2.7%</b>						<b>19.2</b>	<b>18.4</b>

## Comp sheet – Independent Power Producers and YieldCos

### Independent power producers

Company name	Ticker	Rating	Price (US\$)		Mkt cap US\$m	TSR 12m	Net debt (US\$m)		EBITDA - 2020E		EBITDA - 2021E		FCF yields	
			13-Sep-19	Target			2020E	2021E	Macq	Cons.	Macq	Cons.	2020E	2021E
NRG Energy	NRG	Outperform	38.50	45.00	9,740	17.2%	-5,101	-4,636	1,943	1,931	1,781	1,821	15.6%	16.7%
Vistra Energy	VST	Outperform	26.25	32.00	12,907	23.8%	-7,693	-7,369	3,456	3,319	3,106	3,062	14.7%	20.1%

### YieldCos

Company name	Ticker	Rating	Price (US\$)		Mkt cap US\$m	TSR 12m	Net debt US\$m	EV US\$m	DPS - 2020E		DPS - 2021E		Dividend Yield		
			13-Sep-19	Target					Macq	Cons.	Macq	Cons.	2019E	2020E	2021E
Atlantica Yield	AY	Neutral	24.00	25.00	2,438	10.7%	5,602	8,041	1.70	1.71	1.82	1.82	6.5%	7.1%	7.6%
<b>NextEra Energy Partners</b>	<b>NEP</b>	<b>Outperform</b>	<b>51.00</b>	<b>51.50</b>	<b>2,864</b>	<b>4.8%</b>	<b>4,969</b>	<b>7,832</b>	<b>2.26</b>	<b>2.30</b>	<b>2.64</b>	<b>2.63</b>	<b>3.9%</b>	<b>4.4%</b>	<b>5.2%</b>
Clearway Energy	CWEN	Neutral	18.19	19.00	1,334	8.9%	4,906	6,239	0.92	0.90	1.40	1.03	4.4%	5.1%	7.7%
Pattern Energy Group	PEGI	Underperform	27.22	20.00	2,674	-20.3%	2,417	5,091	1.69	1.70	1.69	1.73	6.2%	6.2%	6.2%
TerraForm Power	TERP	Neutral	16.78	17.00	3,510	6.1%	5,514	9,024	0.85	0.86	0.91	0.91	4.8%	5.1%	5.4%
<i>Average</i>													5.2%	5.6%	6.4%

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**Recommendation definitions****Macquarie – Asia, USA, Europe and Mazi Macquarie (SA):**

Outperform – expected return >10%  
 Neutral – expected return from -10% to +10%  
 Underperform – expected return <-10%

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Outperform – expected return >10%  
 Neutral – expected return from 0% to 10%  
 Underperform – expected return <0%

Note: expected return is reflective of a Medium Volatility stock and should be assumed to adjust proportionately with volatility risk

**Volatility index definition\***

This is calculated from the volatility of historic price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60-100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40-60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30-40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25-30% in a year.

**Low** – stock should be expected to move up or down at least 15-25% in a year.

\* Applicable to select stocks in Asia/Australia/NZ

**Recommendation** – 12 months

**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

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All "Adjusted" data items have had the following adjustments made:

**Added back:** goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense  
**Excluded:** non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa\*

**ROA** = adjusted ebit / average total assets

**ROA Banks/Insurance** = adjusted net profit / average total assets

**ROE** = adjusted net profit / average shareholders funds

**Gross cashflow** = adjusted net profit + depreciation

\*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

**Recommendation proportions – For quarter ending 30 June 2019**

	AU/NZ	Asia	RSA	USA	EUR	
Outperform	47.41%	58.03%	49.38%	52.16%	51.95%	(for global coverage by Macquarie, 3.22% of stocks followed are investment banking clients)
Neutral	36.30%	29.24%	32.10%	42.65%	40.69%	(for global coverage by Macquarie, 3.02% of stocks followed are investment banking clients)
Underperform	16.30%	12.74%	18.52%	5.19%	7.36%	(for global coverage by Macquarie, 0.96% of stocks followed are investment banking clients)



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