## COMMONWEALTH OF KENTUCKY

## **BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

ELECTRONIC TARIFF FILINGS OF	)	
LOUISVILLE GAS AND ELECTRIC COMPANY	)	
AND KENTUCKY UTILITIES COMPANY TO	)	
<b>REVISE PURCHASE RATES FOR SMALL</b>	)	CASE NO. 2023-00404
CAPACITY AND LARGE CAPACITY	)	
COGENERATION AND POWER PRODUCTION	)	
QUALIFYING FACILITIES AND NET	)	
METERING SERVICE-2 CREDIT RATES	)	

# RESPONSE OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY TO THE COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

## DATED JANUARY 11, 2024

FILED: January 25, 2024

#### VERIFICATION

## COMMONWEALTH OF KENTUCKY ) ) COUNTY OF JEFFERSON )

The undersigned, **Stuart A. Wilson**, being duly sworn, deposes and says that he is Director, Energy Planning, Analysis & Forecasting for LG&E and KU Services Company, 220 West Main Street, Louisville, KY 40202, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Stuart A. Wilson

Subscribed and sworn to before me, a Notary Public in and before said County and

State, this 17<sup>th</sup> day of <u>January</u> 2024.

Notary Public

Notary Public ID No. KINP 63286

My Commission Expires:

Jamary 22, 2027



## Response to Commission Staff's First Request for Information Dated January 11, 2024

#### Case No. 2023-00404

## **Question No. 1**

#### **Responding Witness: Stuart A. Wilson**

- Q-1. Refer to the attachments to LG&E/KU's October 31, 2023 tariff filings, Generation and Planning Analysis, October 2023 (October 2023 Planning Analysis), page 3. Explain how the Commission's Order in Case 2022-00402<sup>1</sup> affects LG&E/KU's avoided energy cost or avoided capacity cost analysis and the resulting qualifying facility (QF) rates. Provide an explanation of those changes and where those changes occur. Include any resulting rate impact.
- A-1. The October 2023 Planning Analysis assumed the Brown 12 NGCC would be commissioned in 2028 and the Brown 3 and Ghent 2 coal units would be retired. Since the Commission issued the cited Order on November 6, 2023, the Companies have not conducted additional resource modeling or analysis to account for the Order's impact, though they will do so as part of their 2024 Integrated Resource Plan ("IRP") to be filed later this year. Thus, for the purposes of this response, to account for the cited Order the Companies assumed Brown 12 would replace Brown 3 in 2030<sup>2</sup> and Ghent 2 would retire in 2034 (the end of its book depreciation life).<sup>3</sup> As shown in the October 2023 Planning Analysis tables updated below, the impact of these changes on the avoided energy cost is small, and shifting the capacity need from 2032 to 2030 increases the avoided capacity cost.

Note that the Companies filed their avoided cost data prior to the issuance of the cited Order, and the Companies will continue to update their avoided energy and generation capacity costs and resulting QF rates every two years. In those

<sup>&</sup>lt;sup>1</sup> See Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Site Compatibility Certificates and Approval of a Demand Side Management Plan and Approval of Fossil Fuel-Fired Generating Unit Retirements, Case No. 2022-00402, Order (Ky. PSC Nov. 6, 2023).

<sup>&</sup>lt;sup>2</sup> From page 137 of the Commission's Order... "The Commission reiterates that the denial of the CPCN for Brown 12 is wholly based on the Commission's finding that the construction of Brown 12 should be deferred with the construction beginning on a date that provides for an in-service date in 2030." Note also that the Companies assumed Brown 3 would retire in 2030 because the Companies cannot operate Brown 3 and Brown 12 simultaneously without certain transmission upgrades.

<sup>&</sup>lt;sup>3</sup> The same assumption (i.e., retiring the unit at the end of its depreciable life) is made for all other fossil resources.

intervals, their resource plans will likely change as circumstances change, including new environmental requirements. Such changes will also appear in and affect the Companies' triennial IRPs, including the Companies' 2024 IRP to be filed this fall.

	QF Avoided Energy (without line losses for transmission connected projects)			
	7-Year PPA Beginning:			
Technology	2-Year PPA	2024	2025	
Solar: Single-Axis Tracking	29.05	30.67	31.07	
Solar: Fixed Tilt	29.31	31.04	31.44	
Wind	27.92	29.96	30.41	
Other Technologies	28.06	30.42	30.90	

 Table 14: Qualifying Facility Avoided Energy Rates for Transmission

 Connected Projects, without Line Losses (\$/MWh)

Table 15: Qualifying Facility Avoided Capacity Rates forTransmission Connected Projects, without Line Losses (\$/MWh)

	QF Avoided Capacity, 2030 Need (without line losses for transmission connected projects)				
	7-Year PPA Beginning:				
Technology	2-Year PPA	2024 2025			
Solar: Single-Axis Tracking	0.00	13.36	14.91		
Solar: Fixed Tilt	0.00	16.09	17.96		
Wind	0.00	10.54	11.76		
Other Technologies	0.00	9.32	10.40		

 Table 16: Qualifying Facility Avoided Cost Rates for Transmission

 Connected Projects, without Line Losses (\$/MWh)

	QF All-In Avoided Cost Rates (without line losses for transmission connected projects)			
Technology	2024/2025 2-Year PPA Avoided Cost Rate			
Solar: Single-Axis Tracking	29.05	45.01		
Solar: Fixed Tilt	29.31	48.26		
Wind	27.92	41.33		
Other Technologies	28.06	40.52		

	QF Avoided Energy, KU (with line losses)			QF Avoided Energy, LG&E (with line losses)		
	2-Year	-Year Beginning:		2-Year	7-Yea Begin	r PPA ning:
Technology	PPA	2024 2025		PPA	2024	2025
Solar: Single-Axis Tracking	30.43	32.13	32.54	29.86	31.52	31.93
Solar: Fixed Tilt	30.70	32.51	32.94	30.13	31.90	32.31
Wind	29.25	31.39	31.85	28.70	30.79	31.25
Other Technologies	29.39	31.87	32.37	28.84	31.27	31.76

 Table 18: Qualifying Facility Avoided Energy Rates by Company,

 with Line Losses (\$/MWh)

 Table 19: Qualifying Facility Avoided Capacity Rates by Company,

 with Line Losses (\$/MWh)

	QF Avoided Capacity,			QF Avoided Capacity,		
	KU (with line losses)			LG&E (with line losses)		
		7-Year PPA			7-Year	PPA
	2-Year	<b>Beginning:</b>		2-Year	Begini	ning:
Technology	PPA	2024	2025	PPA	2024	2025
Solar: Single-Axis Tracking	0.00	14.22	15.88	0.00	13.91	15.53
Solar: Fixed Tilt	0.00	17.13	19.12	0.00	16.75	18.70
Wind	0.00	11.22	12.52	0.00	10.97	12.25
Other Technologies	0.00	9.92	11.07	0.00	9.70	10.83

Table 20: Qualifying Facility All-In Avoided Cost Rates	s for 2-Year
and 7-Year PPAs by Company, with Line Losses (\$/MW	/h)

	QF All-In Avoided Cost Rate, KU		QF All-In Avoided Cost Rate, LG&E		
	2-Year PPA	2-Year 2024/2025 PPA Avoided Cost Rate		2024/2025 Avoided Cost Rate	
Solar: Single-Axis Tracking	30.43	47.38	29.86	46.45	
Solar: Fixed Tilt	30.70	50.85	30.13	49.84	
Wind	29.25	43.49	28.70	42.63	
Other Technologies	29.39	42.61	28.84	41.78	

LG&E NMS-2 Bill Credit				
Energy*	0.03211			
Ancillary Services	0.00082			
Generation Capacity*	0.01773			
Transmission Capacity	0.00732			
Distribution Capacity	0.00129			
Carbon Cost	0.01338			
Environmental Compliance Cost	0.00105			
Jobs Benefit	-			
NMS-2 Bill Credit for Excess Gen	0.07370			
*With losses				
KU NMS-2 Bill Credit				
Energy*	0.03272			
Ancillary Services	0.00084			
Generation Capacity*	0.01812			
Transmission Capacity	0.00732			
Distribution Capacity	0.00185			
Carbon Cost	0.01338			
Environmental Compliance Cost	0.00397			
Jobs Benefit	_			
NMS-2 Bill Credit for Excess Gen	0.07821			
*With losses				

## Table 21: NMS-2 Bill Credits (\$/kWh)

## Response to Commission Staff's First Request for Information Dated January 11, 2024

## Case No. 2023-00404

## Question No. 2

## **Responding Witness: Stuart A. Wilson**

- Q-2. Refer to the October 2023 Planning Analysis, page 3.
  - a. Explain how PROSYM treats off-system sales.
  - b. Explain why PROSYM excluded off-system sales from consideration and focused the model on forecasted hourly energy costs.
- A-2.
- a. The Companies' PROSYM model has the optional ability to model the incremental generation associated with making non-firm off-system sales ("OSS"). When this option is activated, the model meets native load obligations and sells incremental energy when economic, i.e., when the generation cost is below the market price of energy net of the additional costs to make the sale.
- b. The Companies exclude OSS from resource decisions to focus their analyses on minimizing the cost to serve native load customers and because forecasted market energy prices and transmission availability are highly uncertain and outside the Companies' control. Therefore, assuming that the cost of incremental energy to make OSS would be avoidable by QF or NMS resources would be speculative. Note that the Companies took the same approach to this issue in their October 2023 tariff filings as they did in formulating the QF and NMS-2 rates the Commission approved in Case Nos. 2020-00349 and 2020-00350.

## Response to Commission Staff's First Request for Information Dated January 11, 2024

#### Case No. 2023-00404

#### **Question No. 3**

#### **Responding Witness: Stuart A. Wilson**

- Q-3. Refer to the October 2023 Planning Analysis, Table 1, page 4, and Table 2, page 5.
  - a. Explain what technologies comprise the "Other Technologies" category.
  - b. Explain how the annual Avoided Energy Cost in Table 2 is calculated for the "Other Technologies" category. Include any supporting calculation or workpapers in Excel spreadsheet format with all formulas, rows, and columns unprotected and fully accessible.
- A-3.
- a. The Companies did not use a specific resource to evaluate avoided costs for the "other technologies" category. Rather, the Companies assumed the generic "Other Technologies" had a 100% capacity factor so the resulting avoided energy cost would reflect an equal weighting of hourly marginal costs. This approach is more consistent with the production profiles of other kinds of QF technologies (hydroelectric, biomass, waste, or cogeneration), which typically can operate at any time and under a broad range of weather conditions, unlike wind and solar. Note also that the Companies took the same approach to this issue in their October 2023 tariff filings as they did in formulating the QF "Other Technologies" rates the Commission approved in Case Nos. 2020-00349 and 2020-00350.
- b. The Companies used the avoided energy cost methodology summarized on pages 3-4 of the October 2023 Planning Analysis to compute avoided energy costs for all QF technologies. As discussed above, for "Other Technologies" the Companies applied this methodology to an 80 MW load with a 100% capacity factor so the resulting avoided energy cost would reflect an equal weighting of hourly marginal costs. The Companies performed this calculation in SAS rather than Excel, so there are no supporting Excel workpapers. The supporting SAS files are included in Attachment 5 provided in response to JI 1-3, and are located at the filepath: \02\_03\_04\03\_SAS. An example of this calculation for a single hour is provided in response to AG 1-3(a).

## Response to Commission Staff's First Request for Information Dated January 11, 2024

## Case No. 2023-00404

## Question No. 4

## **Responding Witness: Stuart A. Wilson**

- Q-4. Refer to the October 2023 Planning Analysis, page 7. In Case No. 2022-00402, LG&E/KU based the avoided cost of new capacity on a natural gas combined cycle (NGCC) unit and the November 6, 2023 final Order approved the addition of such a unit at the Mill Creek generating station.<sup>4</sup>
  - a. Explain why a simple cycle combustion turbine (CT) was used in the avoided cost analysis.
  - b. Provide an update to the avoided cost analysis using the NGCC unit characteristics and estimated in-service date approved in Case No. 2022-00402 as the avoided cost benchmark. Include in the updated analysis, the Seasonal Capacity Need as reflected in Case No. 2022-00402 rather than the Seasonal Capacity need that was reflected in the October 2023 Planning Analysis, Table 4, page 7.

#### A-4.

a. First, the Commission's Sept. 24, 2021 Order in the Companies' 2020 rate cases stated, "[T]he Commission adopts the use of a simple cycle CT as the proxy for estimating avoided generation capacity costs."<sup>5</sup> Thus, the Companies followed the Commission's direction by using "a simple cycle CT as the proxy for estimating avoided generation capacity costs" in the Companies' October 2023 QF and NMS-2 tariff filings.

Second, the calculation of avoided energy cost considers each QF technology's generation profile and therefore fully accounts for each technology's avoided energy cost benefits. Therefore, the cost of a CT was used in the calculation of avoided capacity cost so that the result would reflect a capacity-only value; a CT is often considered a proxy for capacity cost because it can be quickly started to meet a reliability need in any hour during the year and typically operates at low capacity factors. As discussed in Case No. 2022-00402, the Mill Creek 5 NGCC is being added primarily

<sup>&</sup>lt;sup>4</sup> Case No. 2022-00402, Nov. 6, 2023 Order at 178.

<sup>&</sup>lt;sup>5</sup> Case Nos. 2020-00349 and 2020-00350, Order at 32 (Ky. PSC Sept. 24, 2021).

# Response to Question No. 4Page 2 of 5CONFIDENTIAL INFORMATION REDACTEDWilson

to replace the round-the-clock dispatchable capacity and energy provided by the retiring coal units. Because QF technologies do not have similar operating characteristics and because the avoided capacity cost is intended to be a capacity-only value, it is not appropriate to use the cost of an NGCC in the calculation of avoided capacity cost. Furthermore, it is not appropriate to use the cost of the Mill Creek 5 NGCC because QFs added over the next two years will not enable the Companies to avoid a portion of this unit.

Finally, in Case Nos. 2020-00349 and 2020-00350, the Companies used two methods to estimate the cost of new solar capacity, the Levelized Cost of a CT method and a method that utilized solar PPA prices to directly calculate annual QF capacity prices. Consistent with least-cost principles, the Companies continue to believe that QF capacity prices should be computed as the minimum capacity price from these two methods.

b. See the response to part a. This notwithstanding, the October 2023 Planning Analysis tables below are updated to reflect Mill Creek 5 costs and a 2027 capacity need. Avoided energy costs are unchanged. Certain information requested is confidential and proprietary and is being provided under seal pursuant to a petition for confidential protection.

Cost	2027 Installation (Nominal \$)
Capital (\$M)	
Capital (\$/kW)	
Fixed O&M (\$/kW-Year)	5.8
Firm Gas Transportation (\$/kW-Year)	13.4

 Table 5: Mill Creek 5 Capital and Fixed Operating Costs

Table 14:	<b>Qualifying Facility Avoided Energy Rates for Transmission</b>
Connected	l Projects, without Line Losses (\$/MWh)

	QF Avoided Energy (without line losses for transmission connected projects)				
	7-Year PPA Beginning:				
Technology	2-Year PPA	PA 2024 2025			
Solar: Single-Axis Tracking	29.05	30.51	30.90		
Solar: Fixed Tilt	29.33	30.89	31.28		
Wind	27.94	29.90	30.33		
Other Technologies	28.05	30.27	30.74		

	QF Avoided Capacity, 2027 Need (without line losses for transmission connected projects)			
	7-Year PPA Beginning			
Technology	2-Year PPA	2024	2025	
Solar: Single-Axis Tracking	0.00	17.71	19.54	
Solar: Fixed Tilt	0.00	21.32	23.53	
Wind	0.00	13.96	15.41	
Other Technologies	0.00	12.35	13.63	

 Table 15: Qualifying Facility Avoided Capacity Rates for

 Transmission Connected Projects, without Line Losses (\$/MWh)

 Table 16: Qualifying Facility Avoided Cost Rates for Transmission

 Connected Projects, without Line Losses (\$/MWh)

	QF All-In Avoided Cost Rates (without line losses for transmission connected projects)			
Technology	2024/2025 2-Year PPA Avoided Cost Ra			
Solar: Single-Axis Tracking	29.05	49.33		
Solar: Fixed Tilt	29.33	53.51		
Wind	27.94	44.80		
Other Technologies	28.05	43.49		

 Table 18: Qualifying Facility Avoided Energy Rates by Company,

 with Line Losses (\$/MWh)

	QF Avoided Energy, KU (with line losses)			QF Avoided Energy, LG&E (with line losses)		
	2-Year	7-Year PPA ar Beginning:		2-Year	7-Yea Begin	r PPA ning:
Technology	PPA	2024	2025	PPA	2024	2025
Solar: Single-Axis Tracking	30.43	31.96	32.36	29.86	31.36	31.75
Solar: Fixed Tilt	30.73	32.35	32.76	30.15	31.74	32.15
Wind	29.27	31.32	31.77	28.72	30.72	31.17
Other Technologies	29.39	31.71	32.20	28.83	31.11	31.59

	QF Avoided Capacity, KU (with line losses)			QF Avo LG&E (	oided Cap with line	acity, losses)
	2-Year	7-Year PPA Zear Beginning:		2-Year	7-Year Begini	· PPA ning:
Technology	PPA	2024	2025	PPA	2024	2025
Solar: Single-Axis Tracking	0.00	18.85	20.80	0.00	18.44	20.35
Solar: Fixed Tilt	0.00	22.70	25.05	0.00	22.21	24.50
Wind	0.00	14.86	16.40	0.00	14.54	16.05
Other Technologies	0.00	13.14	14.50	0.00	12.86	14.19

 Table 19: Qualifying Facility Avoided Capacity Rates by Company,

 with Line Losses (\$/MWh)

Table 20:	Qualifying	g Facility	All-In	Avoided	<b>Cost Rates</b>	for 2-Year
and 7-Year	r PPAs by	Company	y, with	Line Los	ses (\$/MW	h)

	QF All-In Avoided Cost Rate, KU		QF Co	All-In Avoided st Rate, LG&E
	2-Year PPA	2024/2025 Avoided Cost Rate	2-Year PPA	2024/2025 Avoided Cost Rate
Solar: Single-Axis Tracking	30.43	51.99	29.86	50.95
Solar: Fixed Tilt	30.73	56.43	30.15	55.30
Wind	29.27	47.17	28.72	46.24
Other Technologies	29.39	45.78	28.83	44.88

LG&E NMS-2 Bill Credit				
Energy*	0.03194			
Ancillary Services	0.00082			
Generation Capacity*	0.02335			
Transmission Capacity	0.00732			
Distribution Capacity	0.00129			
Carbon Cost	0.01338			
Environmental Compliance Cost	0.00105			
Jobs Benefit	-			
NMS-2 Bill Credit for Excess Gen	0.07916			
*With losses				
KU NMS-2 Bill Credit				
Energy*	0.03256			
Ancillary Services	0.00084			
Generation Capacity*	0.02387			
Transmission Capacity	0.00732			
Distribution Capacity	0.00185			
Carbon Cost	0.01338			
Environmental Compliance Cost	0.00397			
Jobs Benefit	-			
NMS-2 Bill Credit for Excess Gen	0.08379			
*With losses				

# Table 21: NMS-2 Bill Credits (\$/kWh)

## Response to Commission Staff's First Request for Information Dated January 11, 2024

# Case No. 2023-00404

## **Question No. 5**

## **Responding Witness: Stuart A. Wilson**

- Q-5. Refer to the October 2023 Planning Analysis, pages 14–15.
  - a. LG&E/KU utilized avoided cost rates based on the Levelized Cost of a CT methodology for both their 2032 and 2034 capacity need scenarios. Provide the avoided cost rates based on an NGCC unit and provide the updated QF capacity rates with the NGCC unit's avoided costs.
  - b. Explain whether changing the avoided capacity rates based on an NGCC unit rather than a CT would also change the net metering rates. If so, provide updated net metering rates.
  - c. Considering the Commission's final Order in Case No. 2022-00402, explain whether LG&E/KU are anticipating a capacity deficit at any time prior to 2032. If so, provide the anticipated year for the capacity deficit date and the expected MW deficit.

#### A-5.

a. See the response to Question No. 4(a). This notwithstanding, the October 2023 Planning Analysis tables below are updated to reflect the cost of an NGCC from the 2023 NREL ATB. Avoided energy costs are unchanged.

Cost	2032 Installation (Real 2021 \$)	2032 Installation (Nominal \$)
Capital (\$/kW)	1,020	1,268
Fixed O&M (\$/kW-Year)	28.1	34.9
Firm Gas Transportation (\$/kW-Year)	N/A	19.7

#### **Table 5: NGCC Capital and Fixed Operating Costs**

	QF Avoided Energy (without line losses for transmission connected projects)			
	7-Year PPA Beginning			
Technology	2-Year PPA	2024	2025	
Solar: Single-Axis Tracking	29.05	30.51	30.90	
Solar: Fixed Tilt	29.33	30.89	31.28	
Wind	27.94	29.90	30.33	
Other Technologies	28.05	30.27	30.74	

 Table 14: Qualifying Facility Avoided Energy Rates for Transmission

 Connected Projects, without Line Losses (\$/MWh)

Table 15: Qualifying Facility Avoided Capacity Rates for
Transmission Connected Projects, without Line Losses (\$/MWh)

	QF Avoided Capacity, 2032 Need (without line losses for transmission connected projects)		
	7-Year PPA Beginning:		
Technology	2-Year PPA	2024	2025
Solar: Single-Axis Tracking	0.00	11.30	12.76
Solar: Fixed Tilt	0.00	13.61	15.36
Wind	0.00	8.91	10.06
Other Technologies	0.00	7.88	8.90

 Table 16: Qualifying Facility Avoided Cost Rates for Transmission

 Connected Projects, without Line Losses (\$/MWh)

	QF All-In Avoided Cost Rates (without line losses for transmission connected projects)			
Technology	2024/2025 2-Year PPA Avoided Cost F			
Solar: Single-Axis Tracking	29.05	42.74		
Solar: Fixed Tilt	29.33	45.57		
Wind	27.94	39.60		
Other Technologies	28.05	38.90		

	QF Avoided Energy, KU (with line losses)			QF Avoided Energy, LG&F (with line losses)		
	2-Year	7-Year PPA Beginning:		2-Year	7-Year PPA Beginning:	
Technology	PPA	2024	2025	PPA	2024	2025
Solar: Single-Axis Tracking	30.43	31.96	32.36	29.86	31.36	31.75
Solar: Fixed Tilt	30.73	32.35	32.76	30.15	31.74	32.15
Wind	29.27	31.32	31.77	28.72	30.72	31.17
Other Technologies	29.39	31.71	32.20	28.83	31.11	31.59

 Table 18: Qualifying Facility Avoided Energy Rates by Company,

 with Line Losses (\$/MWh)

 Table 19: Qualifying Facility Avoided Capacity Rates by Company,

 with Line Losses (\$/MWh)

	QF Avoided Capacity,			QF Avoided Capacity,		
	KU (with line losses)			LG&E (with line losses)		
		7-Year PPA			7-Year PPA	
	2-Year	Beginning:		2-Year	<b>Beginning:</b>	
Technology	PPA	2024	2025	PPA	2024	2025
Solar: Single-Axis	0.00	12.03	13 58	0.00	11 77	13.28
Tracking	0.00	12.03	15.50	0.00	11.//	13.20
Solar: Fixed Tilt	0.00	14.49	16.35	0.00	14.18	16.00
Wind	0.00	9.49	10.71	0.00	9.28	10.48
Other Technologies	0.00	8.39	9.47	0.00	8.21	9.26

Table 20: Qualifying Facility All-In Avoided Cost Rates for 2-Year
and 7-Year PPAs by Company, with Line Losses (\$/MWh)

	QF C	All-In Avoided ost Rate, KU	QF All-In Avoided Cost Rate, LG&E		
	2-Year PPA	2024/2025 Avoided Cost Rate	2-Year PPA	2024/2025 Avoided Cost Rate	
Solar: Single-Axis Tracking	30.43	44.97	29.86	44.09	
Solar: Fixed Tilt	30.73	47.98	30.15	47.03	
Wind	29.27	41.64	28.72	40.83	
Other Technologies	29.39	40.88	28.83	40.09	

b. In its Sept. 24, 2021 Order in Case Nos. 2020-00349 and 2020-00350, the Commission based the Companies' NMS-2 avoided generation capacity cost components on the Companies' QF seven-year contract rates for the fixed tilt solar technology. Based on this approach, a change to QF rates would impact net metering rates. See the table below.

I C&F NMS-2 Bill Credit				
EG&E NWIS-2 DIII Cleuit	0.02104			
Energy*	0.03194			
Ancillary Services	0.00082			
Generation Capacity*	0.01509			
Transmission Capacity	0.00732			
Distribution Capacity	0.00129			
Carbon Cost	0.01338			
Environmental Compliance Cost	0.00105			
Jobs Benefit	-			
NMS-2 Bill Credit for Excess Gen	0.07089			
*With losses				
KU NMS-2 Bill Credit				
Energy*	0.03256			
Ancillary Services	0.00084			
Generation Capacity*	0.01542			
Transmission Capacity	0.00732			
Distribution Capacity	0.00185			
Carbon Cost	0.01338			
Environmental Compliance Cost	0.00397			
Jobs Benefit	-			
NMS-2 Bill Credit for Excess Gen	0.07534			

# Table 21: NMS-2 Bill Credits (\$/kWh)

c. See the response to Question No. 1. Based on current expectations, any capacity deficit would result from retiring existing resources.