

Fremont Community Solar

Brian Newton

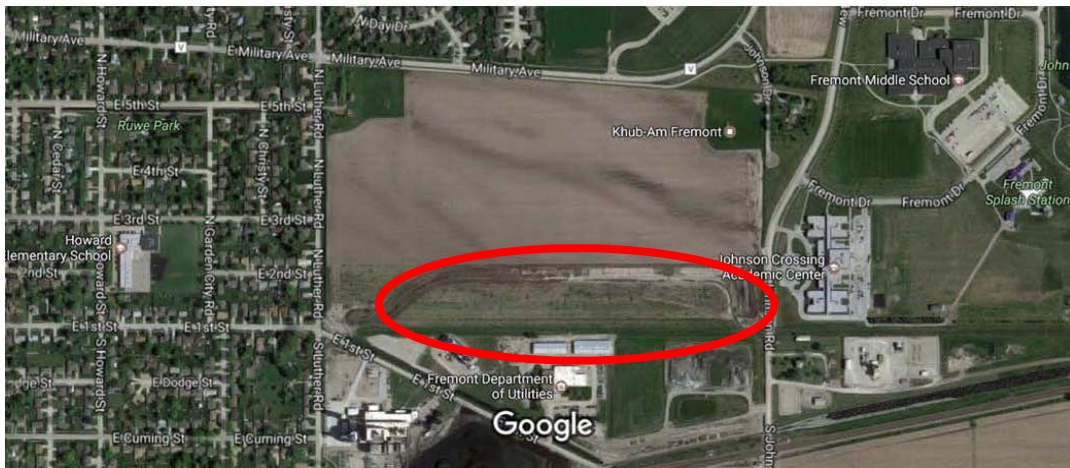
City Administrator

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Location of the Solar Farm



Solar Program Parameters

- **Eligibility:** Available to all customers of FDU, subject to a signed agreement (2 pages)
- **Participation:** Three options:
 - Purchase panel(s)
 - 1 panel yields 43 kWh/month
 - Purchase Solar Energy Shares
 - 1 share equals 150 kWh/month
 - Purchase combination of panels and Solar Energy Shares
 - Minimum: 1 panel or 1 solar energy share
 - Maximum: 50-80% of annual kWh consumption
(Residential 80%/Commercial 50%)
- **Program Length:** 1-year minimum
- **Enrollment Fee:** \$30 refundable after 1-year
- **Portability:** Participation is transferrable



Cost of Community Solar – Residential

(Residential Bill of 1000 kWh with & without Solar Energy)

Residential - Purchase 2 Solar Energy Shares to Achieve a 30% Renewable Energy Mix

	Without Solar			With Solar		
	kWh	Rate	Amount	kWh	Rate	Amount
Summer (Jun-Sept)						
Customer Charge			\$ 14.00			\$ 14.00
Energy Charge Summer	1,000	\$ 0.1096	\$ 109.60	1,000	\$ 0.1096	\$ 109.60
Solar Energy Charge				300	\$ 0.0600	\$ 18.00
Base Energy Credit				300	\$(0.0544)*	\$(16.32)
Total Monthly Bill (Summer)			\$ 123.60			\$ 125.28
Difference						\$ 1.68

* Subject to change annually as the cost of conventional (coal-fired) power changes.



Cost of Community Solar – Residential

(Residential Bill of 1000 kWh with & without Solar Energy)

Residential - Purchase 3 Solar Panels (\$540) and 1 Solar Energy Share to Achieve a 28% Renewable Energy Mix

	Without Solar			-	With Solar		
	kWh	Rate	Amount		kWh	Rate	Amount
Summer (Jun-Sept)							
Customer Charge			\$ 14.00			\$ 14.00	
Energy Charge Summer	1,000	\$ 0.1096	\$ 109.60		1,000	\$ 0.1096	\$ 109.60
Solar Energy Charge					150	\$ 0.0600	\$ 9.00
Base Energy Credit					279	\$ (0.0544)*	\$ (15.18)
Solar Maintenance Charge					129	\$ 0.0277	\$ 3.57
Total Monthly Bill (Summer)			\$ 123.60				\$ 121.00
Difference							\$ (2.60)

Approximate Payback (years) after Federal Tax Credit

12

* Subject to change annually as the cost of conventional (coal-fired) power changes.



Cost of Community Solar – Residential

(Residential Bill of 1000 kWh with & without Solar Energy)

Residential - Purchase 7 Solar Panels (\$1,260) to Achieve a 31% Renewable Energy Mix

	Without Solar			-	With Solar		
	kWh	Rate	Amount		kWh	Rate	Amount
Summer (Jun-Sept)							
Customer Charge			\$ 14.00			\$ 14.00	
Energy Charge Summer	1,000	\$ 0.1096	\$ 109.60		1,000	\$ 0.1096	\$ 109.60
Solar Energy Charge					0	\$ 0.0600	\$ -
Base Energy Credit					301	\$ (0.0544)*	\$ (16.37)
Solar Maintenance Charge					301	\$ 0.0277	\$ 8.34
Total Monthly Bill (Summer)			\$ 123.60				\$ 115.56
Difference							\$ (8.04)

Approximate Payback (years) after Federal Tax Credit

9

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Cost of Community Solar – Commercial

(Single-phase Commercial Bill of 5,000 kWh with & without Solar Energy)

Commercial - Purchase 5 Solar Energy Shares to Achieve a 15% Renewable Energy Mix

Summer (Jun-Sept)	Without Solar			-	With Solar		
	kWh	Rate	Amount		kWh	Rate	Amount
Customer Charge			\$ 27.00			\$ 27.00	
Energy Charge Winter	5,000	\$0.1166	\$ 583.19		5,000	\$ 0.1166	\$ 583.19
Solar Energy Charge					750	\$ 0.0600	\$ 45.00
Base Energy Credit					750	\$(0.0544)*	\$ (40.80)
Total Monthly Bill (Winter)			\$ 610.19				\$ 614.39
Difference							\$ 4.20

* Subject to change annually as the cost of conventional (coal-fired) power changes.



Cost of Community Solar – Commercial

(Single-phase Commercial Bill of 5,000 kWh with & without Solar Energy)

Commercial - Purchase 9 Solar Panels (\$1,620) and 3 Solar Energy Shares to Achieve a 15% Renewable Energy Mix

Summer (Jun-Sept)	Without Solar			-	With Solar		
	kWh	Rate	Amount		kWh	Rate	Amount
Customer Charge			\$ 27.00			\$ 27.00	
Energy Charge Summer	5,000	\$0.1166	\$ 583.19		5,000	\$ 0.1166	\$ 583.19
Solar Energy Charge					450	\$ 0.0600	\$ 27.00
Base Energy Credit					837	\$(0.0544)*	\$ (45.53)
Solar Maintenance Charge					387	\$ 0.0277	\$ 10.72
Total Monthly Bill (Summer)			\$ 610.19				\$ 602.38
Difference							\$ (7.81)

Approximate Payback (years) after Federal Tax Credit 12

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Cost of Community Solar – Commercial

(Single-phase Commercial Bill of 5,000 kWh with & without Solar Energy)

Commercial - Purchase 22 Solar Panels (\$3,960) to Achieve a 15% Renewable Energy Mix

Summer (Jun-Sept)	Without Solar			-	With Solar		
	kWh	Rate	Amount		kWh	Rate	Amount
Customer Charge			\$ 27.00			\$ 27.00	
Energy Charge Summer	5,000	\$0.1166	\$ 583.19		5,000	\$ 0.1166 \$ 583.19	
Solar Energy Charge					0	\$ 0.0600 \$ -	
Base Energy Credit					946	\$(0.0544)* \$ (51.46)	
Solar Maintenance Charge					946	\$ 0.0277 \$ 26.20	
Total Monthly Bill (Summer)			\$ 610.19			\$ 584.93	
Difference						\$ (25.26)	

Approximate Payback (years) after Federal Tax Credit 9

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Solar Service Agreement

- Term: 20-years, but can be terminated with notification
- Transfer/assignment: Can be transferred or assigned (panels repurchased from residential customers)
- Enrollment fee: one-time \$30, applied to bill after 1-year
- Services: Purchase panel(s) or Solar Energy Share(s)
- Environmental: Attributes stay with customer
- Force Majeure: City not liable to deliver energy if farm is out of commission due to uncontrollable forces
- Rate Rider: Draft of ordinance approving fees



Community Solar Farm Next Steps

- Customer signups: 45-day window to aggregate numbers (purchased panels vs. shares)
- Set Size of Farm: 1MW minimum, but could be larger
- Finalize Financing: Sign lease agreement with local bank
- Prepare site: Disc and seed grass
- Initiate Construction: GenPro begins construction in August/September
- Online: January 1, 2018



Questions?

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FREMONT MUNICIPAL ELECTRIC AND WATER PLANT

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