

connected ●●●● to the sun

Share the SunSM and SunRateSM Workshop #4

Monday, February 11, 2013



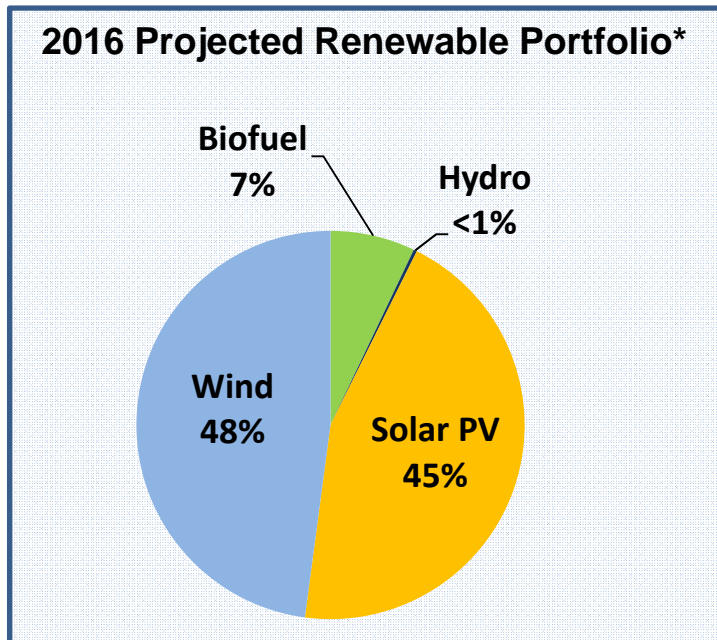
*connected●●●●●to the sun:
Agenda*



- Program Overview & Discussion
- Feed-in-Tariff & Share the Sun Parameters
- Re-MAT Application Process
- Re-MAT Pricing Explanation
- PPA Discussion

connected.....to the sun: Listening to Our Customers

- Our research found customers want to support solar energy
- Only 30% of SDG&E customers can take advantage of rooftop solar
- SDG&E is committed to solar and renewable energy



Preference for Renewable and Carbon Neutral Sources	
Source	%
Solar	37%
No Preference	32%
Wind	16%
Nuclear	6%
Geo-Thermal	5%
Hydro-Electric	4%
Other	> 1%

Source: The Nielsen Company

Nielsen Research – Energy Trends;
October, 2009; 32,000 Respondents

* Contracted as 3/2012

*connected.....to the sun:
Program Principles and Objectives*



SDG&E to expand access to solar energy to customers, consistent with key principles:

1. Make solar energy available to all bundled residential and commercial customers, regardless of property ownership, income level, and credit rating
2. Maintain non-participant rate indifference
3. Protect consumers
4. Facilitate a new market for solar providers
5. Minimize costly grid impacts
6. Allow for market feedback to develop future innovative community solar projects based on solar provider/customer participation

connected●●●●to the sun: Two Pilot Program Options



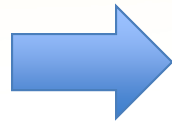
- SDG&E filed an application with the CPUC for *connected●●●●to the sun* on January 17, 2012.
- The application includes two pilot program elements:
 - *Share the Sun* allows bundled customers to work directly with solar providers to acquire rights to a portion of the energy produced by a specific solar power facility and receive a bill credit for the value of that energy (10 MW pilot).
 - *SunRate* allows bundled customers to buy some or all of their energy from local solar projects already under contract with SDG&E through a “green tariff” (10 MW pilot).
- If the application is approved, the programs would be available to customers in 2014.

connected.....to the sun: SunRate - How it Works

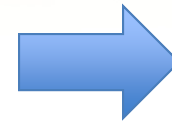
SDG&E's SunRate - for customers



SDG&E sets aside local solar projects under contract for customers



Customers can subscribe to buy solar energy for 50 percent, 75 percent, or 100 percent of their electricity use



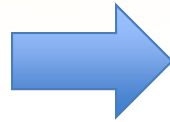
Customers receive solar energy from SDG&E

*connected.....to the sun:
Share the Sun - How it Works*

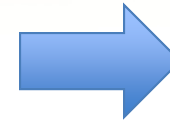
Share the Sun - for solar providers and customers



*Solar provider
constructs
projects in San Diego*



*Customers
purchase/acquire
rights to the
facility's capacity
from a participating
solar provider*



*Customers receive
solar energy and a
credit on their
monthly bill from
SDG&E*

*connected●●●●to the sun:
Potential Benefits*



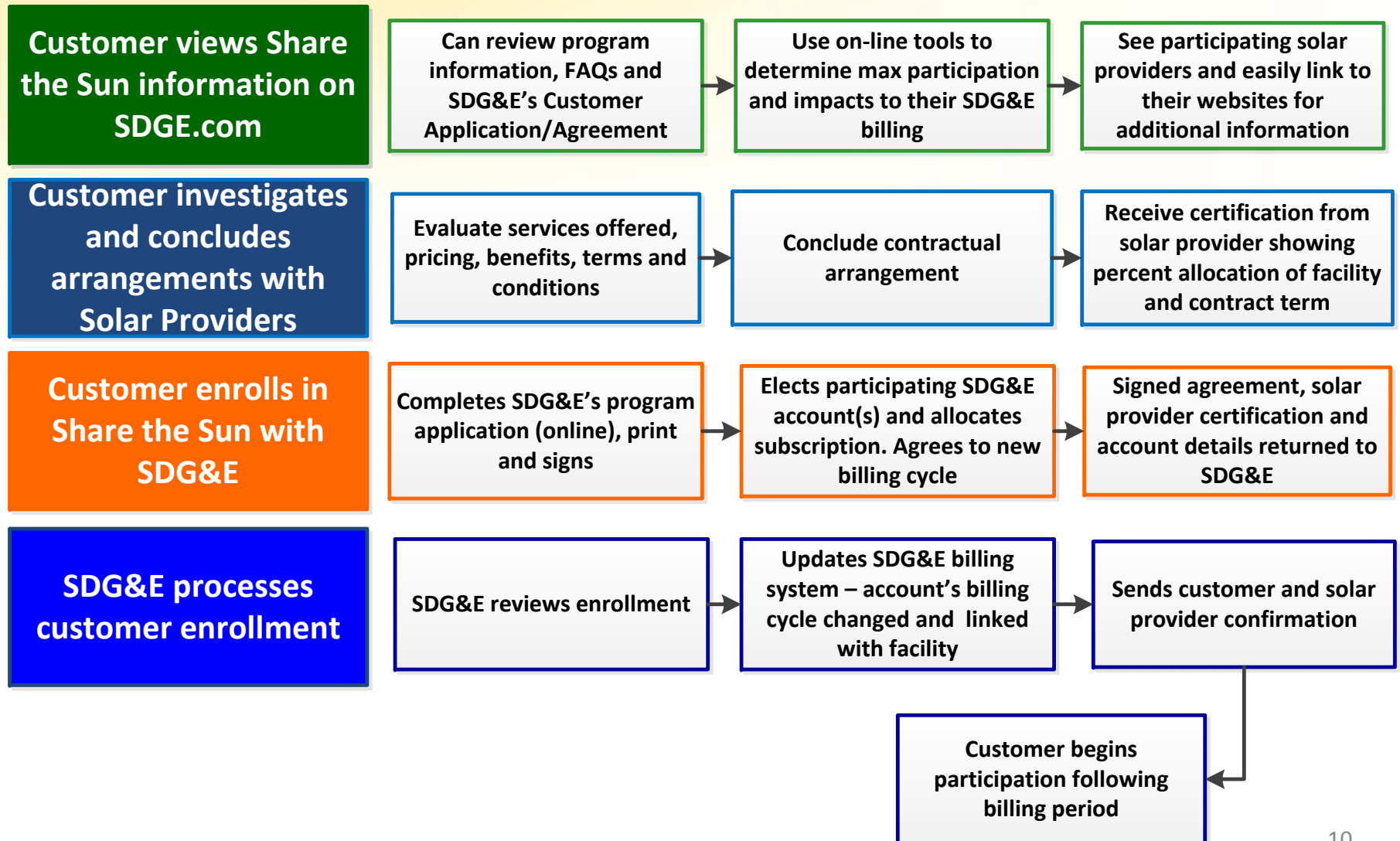
- Expands local solar access and greater alternatives to all bundled SDG&E customers
- Removes site restrictions and building ownership as a hurdle to solar energy use
- Customers can lock-in their commodity price with a longer-term commitment
- May help customers achieve their sustainability goals and environmental requirements
- Allows customers to take their solar subscription with them when moving within SDG&E's service territory

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Overview of Pilot Programs*



	Share the Sun	SunRate
Pilot Size	10MW	10MW
Eligible Customer	SDG&E bundled customer	SDG&E bundled customer
Subscription	Acquire rights to facility's capacity. Allocation of generation output.	50%, 75% or 100% of energy use
Subscription Upper Limit	200% of customer's annual energy use	100% of customer's monthly energy use
Term Commitment	5, 10 or 15 years	1, 5, 10 or 15 years
Lock-in solar energy cost with long-term commitment	Yes	Yes
SDG&E program subscriptions can move to new SDG&E account	Yes	Yes
Customer's ability to sell/transfer subscriptions	Yes – dependent on solar provider contract & customer eligibility. Change coordinated between solar provider and SDG&E.	No
Customer's purchase solar energy	Yes	Yes
Customer receives FiT payment bill credit	Yes	No

Share the Sun: 4 Step Enrollment Process



connected.....to the sun: Combined Customer Outreach Overview



- SDG&E will make customers aware of both programs using various forms of communications
 - Media
 - Electronic communications
 - SDG&E website & coordinate with other SDG&E services
- Outreach efforts include working with local communities and special interest groups to reach interested customers
- SDG&E will make customers aware of participating solar providers on SDG&E's website, with links to their websites
- Programs will have on-line SDG&E enrollment applications available
- Input and other considerations
 - Consideration of on-line tools – would require customer to input information provided by solar provider
 - SDG&E make an informational sheet of considerations when evaluating solar provider offers

Share the Sun: Role of the Solar Provider



- Market to, and enroll, bundled customers
- Manage customer subscriptions / keep facility subscribed
- Coordinate with SDG&E related to processes and rules for the program
- Adhere to consumer protection measures
- Follow the requirements of the PPA
- Maintain a positive presence in the community

Share the Sun: Solar Providers' Role in Marketing the Program



- Solar provider is responsible for marketing their participating solar facility to customers and addressing all customer inquiries related to their participation
- Solar provider marketing rules:
 - Participating solar providers may use SDG&E's name on a limited basis as defined by SDG&E
 - Marketing to customers related to the program will be limited to solar providers that are participating in the program
 - Participating solar providers must have an operational facility before customer agreements become effective

Share the Sun: Goals for Consumer Protection



- Program success and expansion will require satisfied customers, successful solar providers and fully subscribed participating solar facilities
- Goals:
 - Establish the right balance between consumer protection and an open marketplace for providers
 - Ensure customers can make an informed decision
 - Easily evaluate solar provider proposals
 - Fully informed of financial obligations
 - Fully informed of benefits and risks
 - Ensure solar providers can meet program needs
 - Ability to build and successfully operate renewable facility
 - Ability to serve SDG&E customers

Share the Sun: Customers Being Informed Solar Provider Requirements



- Inform Customers of Basic Provisions
 - Program is not intended to allow customer to profit from participation; the purpose is to allow customer to purchase solar power to cover customer's energy usage
 - In event of solar provider's default, bankruptcy, casualty, or insolvency, customer's participation rights in program and in solar project may be affected
 - What customer's termination rights are and how to execute
- Providers will be required to use a standard pricing form and fully disclose all customer costs
- Maintain customer service assistance during normal business hours
- Keep customers informed of operating status (facility production issues or issues of default on material agreement terms with SDG&E)

Share the Sun: Consumer Protection Solar Providers - Other Safeguards



- Allow CPUC oversight over unresolved consumer complaints; SDG&E to refer all initial customer complaints related to a solar provider back to the solar provider to resolve.
 - If contacted again and depending on the issue, SDG&E may reach out to the solar provider to ensure their customer service management is aware of the issue.
- Assignment/transfer of project management obligations or ownership to third party requires SDG&E's consent in accordance with PPA/Program terms
- Must keep certain customer information confidential
- **Discussion –**
 - Make whole provision; should solar providers be required to provide a financial safety net to protect the customer from loss, casualty and nonperformance of project?
 - Business model does not violate federal or state securities or tax laws

Share the Sun: Legal Opinion Discussion



- A solar project that offers participation rights to the public may create securities and taxation issues that must be resolved to protect all participants
- SDG&E would like to discuss how best to satisfy this need
- Options for discussion:
 - Provide legal opinion from a law firm on whether business model complies with securities and taxation laws
 - Gives solar providers flexibility to design business model that best meets their needs
 - Upfront costs to secure (which may be able to be shared or reduced in certain circumstances)
 - Discuss with solar providers the possibility of creating a standard business model that does not violate securities and taxation laws. Intended to allow any solar provider to use that model to participate in program, if the solar provider complies strictly with its requirements. Solar provider may not be required to provide a legal opinion in this case
 - Obtain input from solar providers regarding most feasible business model options
 - Look to existing guidance from Securities and Exchange Commission about projects
 - Other Options?

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Additional Topics from SF Workshops*



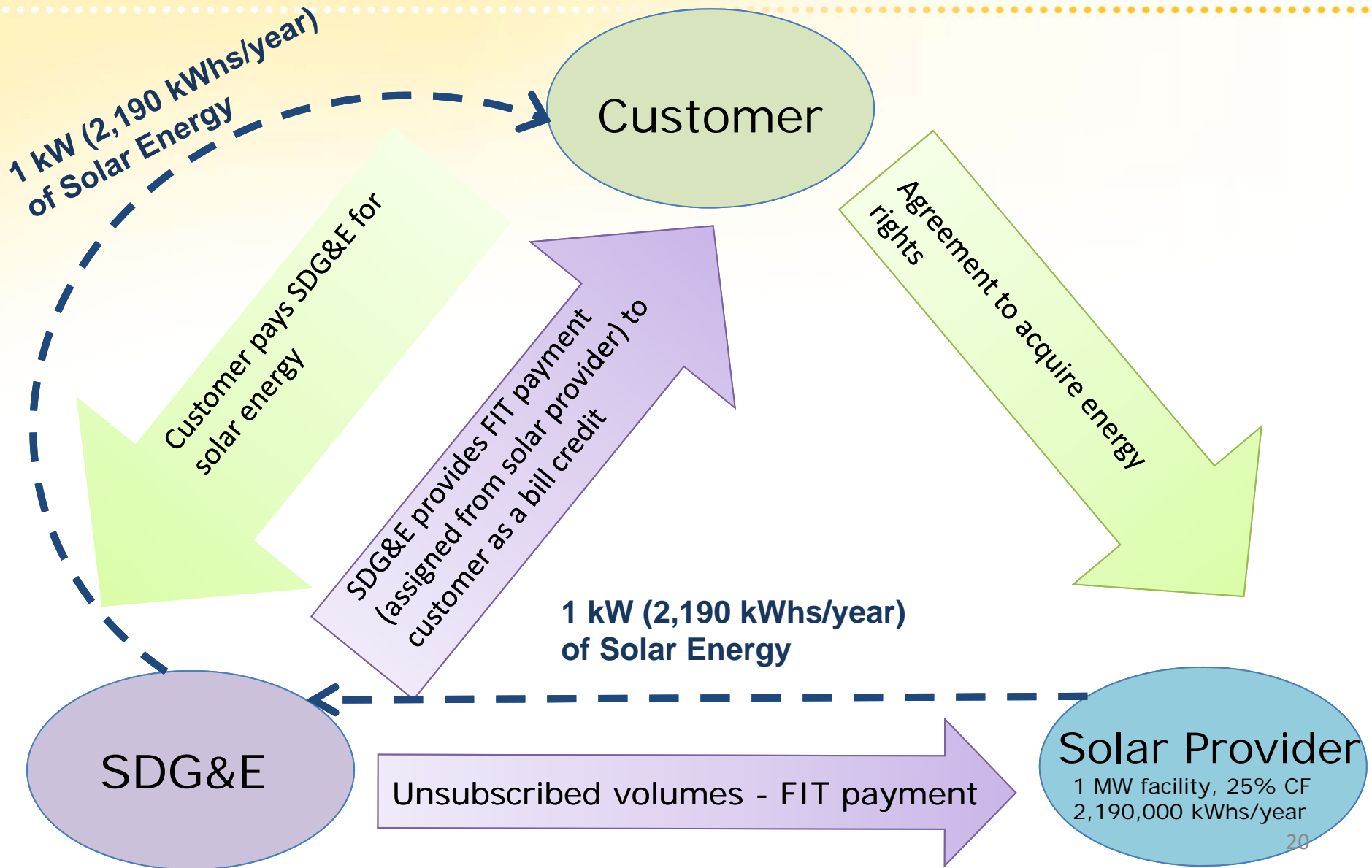
- TURN's alternate *SunRate* proposal
- Creating low income workforce development and job opportunities as a part of Share the Sun; reduced rate for low-income participants
- Share the Sun / SunRate RPS implications
- Possible alternatives to Share the Sun pricing methodology; minimum subscription levels
- SDG&E affiliate participation in pilot phase of programs
- Program administrative costs – tracking and cost recovery methods
- Participation of DA providers in SDG&E's pilots, assuming the programs do not constitute DA
- Whether the program should participate in the California Air Resources Board allowance set aside program for voluntary renewable purchases
- The Share the Sun and SunRate solar value adjustment

Share the Sun: Money/Energy Flow



- Solar provider sells energy to SDG&E and agrees to assign SDG&E's monthly FiT payment to subscribed customers in the form of a bill credit
 - SDG&E pays solar provider directly for unsubscribed energy
- Customer works directly with solar provider to acquire rights to the facility's capacity –
 - *Solar provider provides customer with:*
 - *Expected generation output of the customer's portion of the facility*
 - *The price that the solar provider will charge the customer for its portion of the facility's output*
 - *Expected monthly solar energy price to be charged by SDG&E (FiT price plus adders, less the average commodity cost)*
 - *Expected monthly bill credit to be provided by SDG&E (FiT payment assigned to customers)*
 - *Customer and solar provider enter into separate agreement -- SDG&E is not a party to this arrangement*
- *Monthly SDG&E reads generation meter, bills customers for solar energy and applies bill credit to customer's SDG&E bill.*

Share the Sun: Money/Energy Flow Example



Share the Sun: SDG&E Solar Energy Cost



- Comprised of three components:
 - The cost of subscribed facility solar
 - A charge to ensure the remaining bundled customers are indifferent
 - An adjustment to account for the value of the solar energy as compared to the value of SDG&E's average commodity

Cost of Subscribed Facility Solar	\$ 0.104
Power Charge Indifference Adjustment (PCIA)	\$ 0.009
Solar Value Adjustment	<u>\$ (0.006)</u>
Solar Energy Cost	\$ 0.107

* Illustration based on typical solar profile

Share the Sun: Customer Economics



- There are three components related to the customer's overall economics of participating in the program
 - SDG&E solar energy cost (cost of solar at the FIT rate, plus adders, less the average commodity cost)
 - SDG&E bill credit (FIT payment that would have gone to the solar provider is assigned to the customer)
 - Solar provider charges (The financial agreement between the customer and solar provider)
- SDG&E will calculate the customer's solar energy cost and FIT payment bill credit and include both in the customer's monthly SDG&E bill (they will cancel out)
- The solar provider will be responsible for any financial transaction related to their agreement with the customer

Share the Sun: SDG&E Energy Payment



- SDG&E bills participating customers as usual, including their commodity rate. Customer's will pay an incremental cost or receive a credit for their subscription payment.
- If the solar cost is higher than SDG&E's average commodity cost, the customer will see an additional charge

Illustrative Example:

Solar Energy Cost* \$/kWh	\$ 0.107
SDG&E Average Commodity Cost \$/kWh	<u>(\$ 0.068)</u>
Share the Sun Energy Payment or (Credit)	\$ 0.039

*Illustration based on facility's FiT price, plus adders – see previous slide

Share the Sun: Customer Bill Credit



- Credit the customer the FiT cost
 - The customer has acquired the rights to a facility's capacity from the solar provider and the solar provider assigns the FiT payment from SDG&E to the customer as a bill credit
 - The bill credit is calculated based on the FiT price paid to the solar provider by SDG&E pursuant to their Power Purchase Agreement. FiT payment dependent on facility's generation output by time of day periods during month
 - Customer receives prorata allocation based on their subscription
 - The solar provider is best source to provide customer with information related to the overall economics of their subscription
 - Expected facility performance
 - Knowledgeable of FiT agreement with SDG&E (establishes basis for customer's solar energy cost and bill credit)
 - Owner for solar provider/customer financial agreement (Subscription level and financial transactions)

connected.....to the sun: Share the Sun Customer Bill Mechanics



	Component	Electricity Delivery		Rate/kWh		Charge Amount
Standard Customer Bill						
Variable Rates	Commodity	200	kWh	x	\$ 0.068	= \$ 13.60
	Transmission & Distribution (T&D)	200	kWh	x	\$ 0.075	= \$ 15.00
Total Electric Charges						\$ 28.60

Add the Share the Sun Energy Payment						
Fixed Rate for Contract Term	FiT Pricing (Paid by Customer)	200	kWh	x	\$ 0.104	= \$ 20.80
	Power Charge Indifference Adjustment	200	kWh	x	\$ 0.009	= \$ 1.80
	Solar Value Adjustment	200	kWh	x	\$ (0.006)	= \$ (1.20)
Share the Sun Solar Energy Cost					\$ 0.107	\$ 21.40
Variable Energy Cost	Average Commodity Cost	200	kWh	x	\$ (0.068)	= \$ (13.60)
Share the Sun Energy Payment					\$ 0.039	= \$ 7.80

Subtract the Share the Sun Bill Credit						
Fixed Rate for Contract Term	FiT Pricing	200	kWh	x	\$ (0.104)	= \$ (20.80)

Total Share the Sun Credit						\$ (13.00)
SDG&E Total Electric Service						\$ 15.60
Price of Energy Rights Purchased by Customer						?
Customer's Total Cost						?

Share the Sun: Locking in Commodity Price



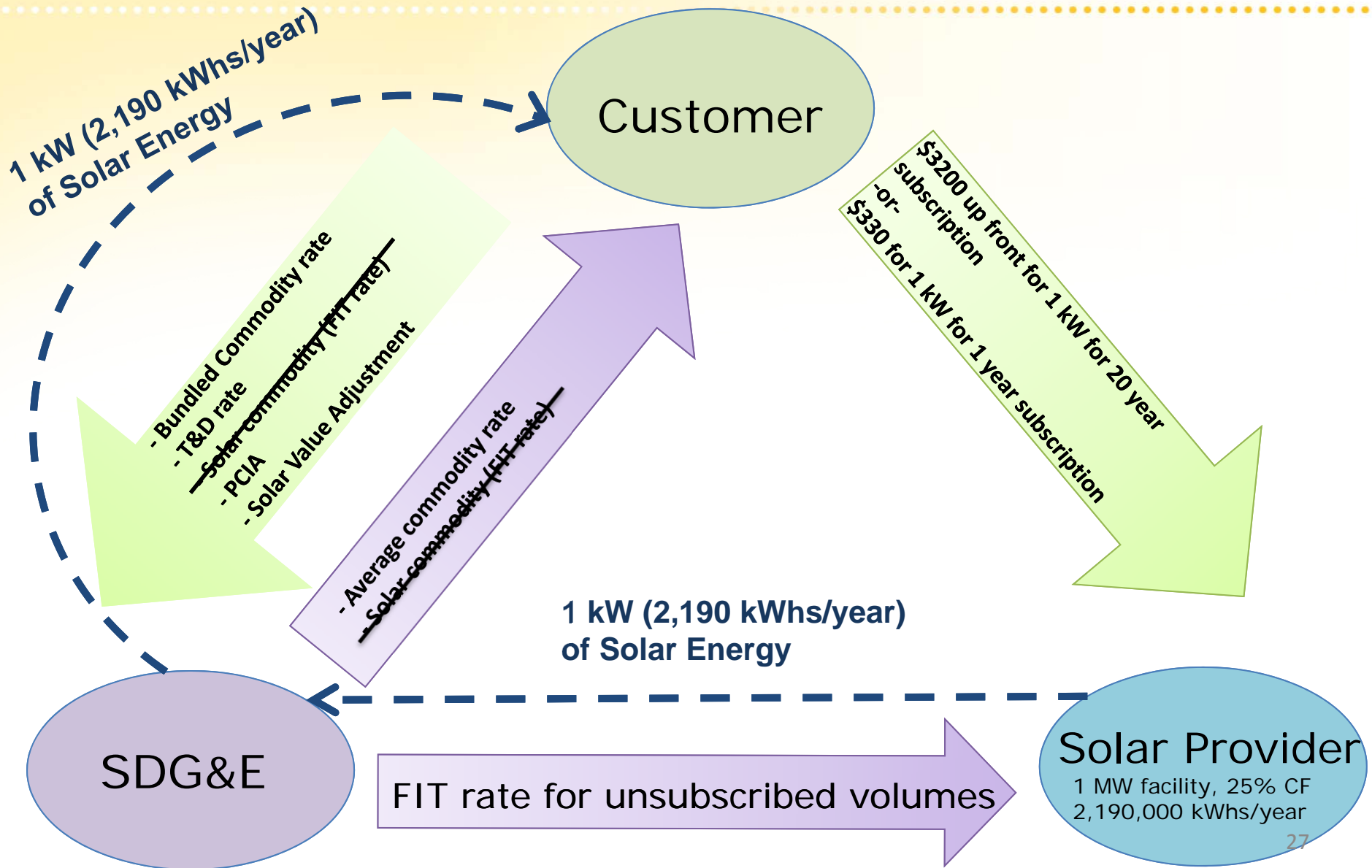
A customer's fixed commodity cost depends upon how many years they subscribe for

Subscription (Years)	1	5	10	15
Share the Sun FiT Price \$/kWh	\$0.104	\$0.104	\$0.104	\$0.104
Levelized PCIA \$/kWh	\$0.009	\$0.012	\$0.013	\$0.013
Solar Value Adjustment \$/kWh	<u>(\$0.006)</u>	<u>(\$0.006)</u>	<u>(\$0.006)</u>	<u>(\$0.006)</u>
Fixed Share the Sun Commodity Cost \$/kWh	\$0.107	\$0.110	\$0.111	\$0.111

A customer's premium cost or savings in a given year depends upon what happens to commodity costs over time

Subscription (Years)	2014	Increase in Avg Comm Cost	Decrease in Avg Comm Cost
Share the Sun Commodity Cost \$/kWh*	\$0.111	\$0.111	\$0.111
Customer Avoided Avg Commodity Cost	<u>(\$0.079)</u>	<u>(\$0.150)</u>	<u>(\$0.050)</u>
Resulting Premium Cost	\$0.032	(\$0.039)	\$0.061
Monthly Premium 500 kWh Customer	\$16.50	(\$19.50)	\$30.50
*Represents a 15-year subscription			

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 Money/Energy Flow Example – Share the Sun



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Business Need / Rules for Early Termination Fees*



- Maintain low administrative costs
- Maintain nonparticipant indifference
- Hardship cases handled on a case by case basis
- Costs contained within the program

Need	Explanation	Customer Subject to Termination Fee	
		Share the Sun	SunRate
For convenience	Customer may choose to un-enroll at any time for any reason	Yes*	Yes
Terminating SDG&E commodity service	Customer moving outside territory or no longer being served commodity by SDG&E	Yes*	Yes
For cause	Customer action not in compliance with agreement – such as attempts to sell or transfer subscription in a manner that violates SDG&E program rules or customer agreement	Yes*	Yes
Termination of Solar Provider	Solar Provider agreement terminated with cause (PPA or Program agreement). Solar Provider responsible for termination fees.	No	N/A
Termination of Program	SDG&E terminates program or CPUC requires termination of program	No	No

* Termination fee not applicable if solar provider arranges for subscription to be reassigned to another eligible customer accepting terms of program. Consider if more effective to have solar provider responsible for termination fees.

Share the Sun ("STS") & The Feed-in-Tariff ("FiT") Program



- The CPUC's FiT program requirements will be used as the starting point for determining STS program requirements
 - Facilities interested in participating in STS must meet FiT program requirements, and additional STS requirements as outlined in the following slides
 - Any MW not subscribed under the STS program shall count against any remaining capacity available under the FiT
 - Revenue will be generated from the following two sources:
 - Customer Contracts: amount to be determined through developers' negotiations with customers for the subscribed portion of the facility's output
 - Applicable FiT Price: any remaining unsubscribed portion shall be paid for by SDG&E in the amount of the FiT price in effect when the contract between SDG&E and the developer is executed
- ***Please note that the current Feed-in-Tariff program is under revision, the information regarding the program presented in these slides is subject to change pending approval of the IOU Tariffs and Joint IOU PPA***

Share the Sun: FiT Viability Criteria

(D.12-05-035, pg. 45, 69-70)



- Bid Fee: \$2/kW
- Interconnection: System Impact Study, Phase 1 Study, or passed Fast Track screens or supplemental review (interconnection can be through WDAT or Rule 21 until the CPUC determines otherwise)
- Site Control: purchased, leased, or option to purchase or lease upon PPA execution
- Development Experience: completed or begun construction of at least one project of similar technology and capacity
 - Modification for Share the Sun: Respondent must describe his/her development team and experience in detail and demonstrate that his/her team and business structure supports customer marketing and service practices
- Online Date: within 24* months of PPA execution
- Seller Concentration Limit: 10 MW
 - Modification for Share the Sun: this amount will be calculated by adding together all of the developer's executed FiT and STS MW's

*18 months referenced in SDG&E's testimony

Share the Sun: Additional FiT Parameters

(D.12-05-035, pg. 7, 56-58, 67, 95, 101)



- Capacity not more than 3 MW
 - Modification for Share the Sun: projects may be up to 1 MW in size, until 80% of that output is subscribed, then can build out to 3 MW
- Strategically located: causing no more than \$300,000 in transmission upgrades
- Register with the FERC as a QF
- Attest that the project is the only one being developed by seller on any single or contiguous piece of property
 - Modification for Share the Sun: the initial 1 MW facility that is expanded to a 3 MW facility upon reaching 80% subscription does not violate this rule
- Project cannot participate in NEM or other incentive programs
- Contract term: 10, 15, or 20 years
- SB32 FiT as basis for pricing:
 - Using FiT price discourages gaming between Share the Sun and FiT
 - In order for SDG&E to count the unsubscribed volumes from Share the Sun towards its FiT targets, it must apply the FiT price to both programs
 - Transparent source
 - Intended to represent approximate market price

Share the Sun: Additional Parameters

- The solar provider must
 - Be registered as a Renewable Retailer & Installer with the California Energy Commission;
 - Provide proof of good standing on record with the California Secretary of State as required for corporate and limited liability entities;
 - Be properly licensed, fully experienced and qualified for the services or business transactions performed with retail customers; and
 - Use a business model that does not violate federal or state securities or tax laws
- Ownership & Marketing Responsibilities
 - Solar providers will own and operate the facility and be responsible for development, land acquisition, permitting, financing and construction for the facility
 - Solar providers will be responsible for marketing to customers and addressing all customer inquiries
- Facility Requirements
 - CEC-certifiable as an eligible renewable resource (“ERR”);
 - New facility utilizing a commercially proven technology; and
 - Deliver entire output to SDG&E.

Share the Sun: Facility Subscription Requirements



Proposal from Testimony	Proposals from SF Workshops 1/28-30	Proposal for Expanded Program (SDG&E)
<ul style="list-style-type: none"> • Limit size to 1 MW to minimize RPS over procurement risk • Initial Maximum Capacity Limit: 1 MW <ul style="list-style-type: none"> • Minimum Subscription Level Required over Contract Term: Not specified • Maximum Capacity Limit once the 1 MW facility is 80% subscribed: 3 MW <ul style="list-style-type: none"> • Minimum Subscription Level Required over Contract Term: Not specified 	<ul style="list-style-type: none"> • No 1 MW size limit, but Share the Sun volumes are capped at FiT requirement to eliminate RPS over procurement risk (SDG&E) • Process <ul style="list-style-type: none"> • Developer will apply under the new Re-MAT FiT Program, and indicate an interest in the STS program • If deemed eligible, the developer will receive a queue number, and if the developer accepts a Re-MAT price, will execute an STS (modified FiT) PPA with SDG&E • Developer’s facility will be limited to 3 MW, and any unsubscribed capacity will count against SDG&E’s FiT capacity • Pricing Proposal (CleanPath Ventures, Colorado Energy Collective) <ul style="list-style-type: none"> • Subscribed Capacity Price: applicable FiT price • Unsubscribed Capacity Price: TBD amount below applicable FiT Price (potentially a brown power price) • Rationale: will maximize incentive for developer to achieve and maintain the highest possible level of customer subscriptions for his/her facility 	<ul style="list-style-type: none"> • Initial Maximum Capacity Limit: 1 MW <ul style="list-style-type: none"> • Minimum Subscription Level Required over Contract Term: None • Maximum Capacity Limit once the 1 MW facility is 80% subscribed: 3 MW <ul style="list-style-type: none"> • Minimum Subscription Level Required over Contract Term: 50% • Checkpoints, if subscription falls below <ul style="list-style-type: none"> • 70% in any 12 month period (rolling average), developer must provide a remedial action plan for improving subscription level • 50% in any 12 month period (rolling average), developer is in default and SDG&E has the option to terminate

Share the Sun: FiT Application Process



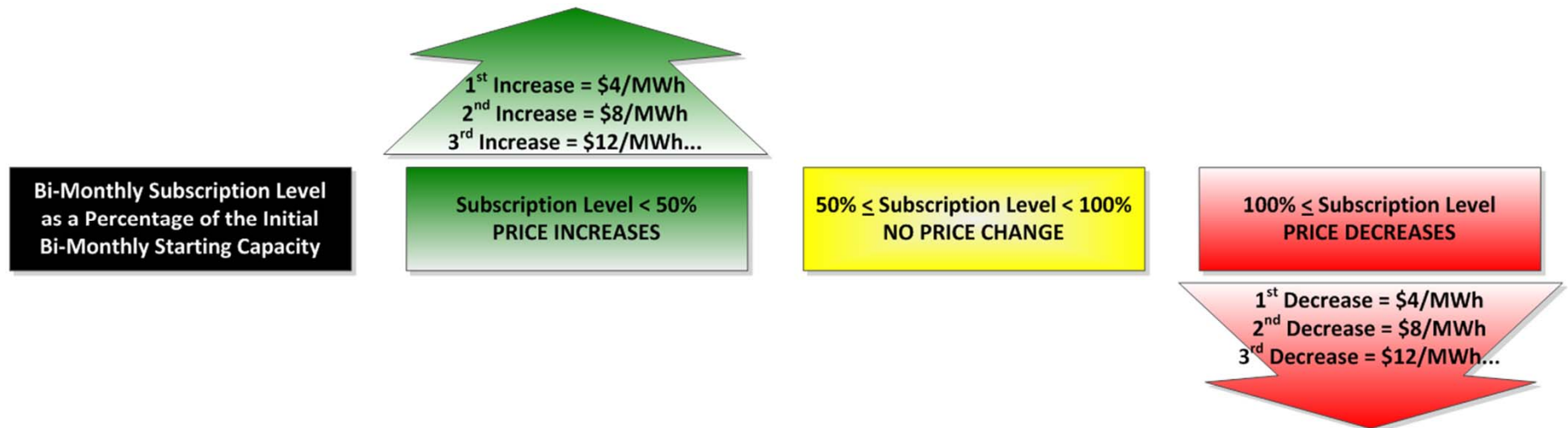
- Program Participation Request (“PPR”): form to be completed by Respondent seeking a queue number
 - Will be available on SDG&E’s FiT Program website
 - Must be submitted along with Bid Fee (\$2/kW), and all required supporting documentation for the project to be considered for program eligibility

- Timing
 - Queue positions will be based on date and time of PPR submittal
 - Within 20 business days of PPR submittal, SDG&E will notify Respondent of its determination
 - Eligible: Respondent will receive a queue number
 - Incomplete: Respondent will be allowed a one-time 10 business day extension to correct minor mistakes or clarify project details
 - The original PPR must show that the project meets the eligibility requirements, material problems with project eligibility will preclude an extension and the project will be deemed ineligible
 - Ineligible: Respondent did not meet eligibility requirements and is not eligible to participate in the program
 - Respondent may remedy eligibility issues and reapply, if so, the date and time of submittal of the new PPR will be used to assign Respondent’s queue number if the project is deemed eligible

Share the Sun: FiT Program Pricing Mechanism: Renewable Market Adjusting Tariff (Re-MAT)



- As a precondition for any price change to occur, there must be at least 5 eligible projects with different developers in the queue for a product type
- Increases and Decreases
 - Begin at \$4/MWh, and adjust by an incremental \$4/MWh for each subsequent increase or decrease
 - Will reset to \$4/MWh following a month in which the price was unchanged
 - Are not capped
- Price change thresholds are as follows*:



*A full explanation of the pricing mechanism can be found on pages 46-48 of D.12-05-035

Share the Sun: Re-MAT Example



Bi-Monthly Period	1	2	3	4	5	6
MW Capacity Offered	3	3	3	3	3	3
MW Accepted	1	1	1	2	3	3
<i>MW Accepted as % of Initial Starting Capacity</i>	33%	33%	33%	67%	100%	100%
<i>Developers in Queue</i>	5	5	5	5	5	5
Starting Price (\$/MWh, pre-TOD)	\$89.23	\$93.23	\$101.23	\$113.23	\$113.23	\$109.23
<i>Increase/Decrease (\$/MWh, pre-TOD)</i>	\$4.00	\$8.00	\$12.00	\$0.00	-\$4.00	-\$8.00
Price for Subsequent Period (\$/MWh, pre-TOD)	\$93.23	\$101.23	\$113.23	\$113.23	\$109.23	\$101.23
<i>Initial Starting Capacity</i>						

Share the Sun: Time-of-Day (“TOD”) Adjustment to Re-MAT Price

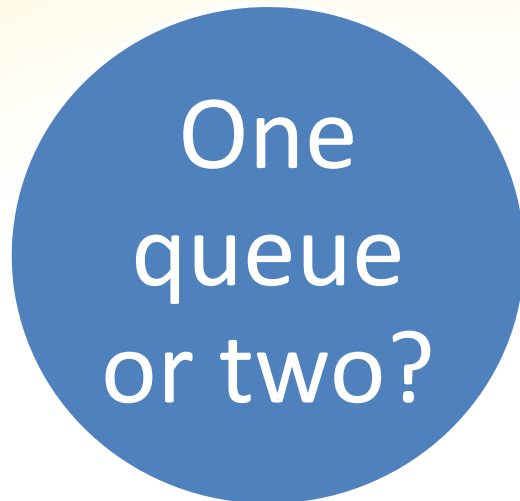


- TOD factors are used to adjust a PPA price to account for the value of the energy delivered under the contract
- TOD factors are determined for each month, day, and hour of a year, and are approved by the CPUC
- The table below demonstrates how the energy produced under a contract using the starting Re-MAT price of \$89.23/MWh would be adjusted using SDG&E’s CPUC-approved TOD factors

TOD Period		Period Days and Hours	(A) Full Capacity Deliverability Status Time-of-Day Factor	(B) Starting FIT Price (\$/MWh)	Adjusted FIT Price (\$/MWh) (A * B)
Winter 11/1-6/30	On-Peak	M-F, 1pm-9pm PST	1.089	\$89.23	\$97.17
	Semi-Peak	M-F, 6am-1pm, 9pm-10pm PST	0.947	\$89.23	\$84.50
	Off-Peak	All other days/hours/NERC holidays	0.679	\$89.23	\$60.59
Summer 7/1-10/31	On-Peak	M-F, 11am-7pm PST	2.501	\$89.23	\$223.16
	Semi-Peak	M-F, 6am-11am, 7pm-10pm PST	1.342	\$89.23	\$119.75
	Off-Peak	All other days/hours/NERC holidays	0.801	\$89.23	\$71.47
Example: a project’s annual TOD is 1.17*			1.17	\$89.23	\$104.40

*A project’s annual TOD will be calculated as follows: [(project’s 8760 * corresponding TOD factors) / (sum of project’s 8760)], the 1.17 used above is purely illustrative, and does not represent or guarantee the TOD of any particular project 37

Share the Sun: Impact to FiT Requirements



Combined Share the Sun/FiT approach

- SDG&E procures up to 10 MWs of Share the Sun projects as part of its existing ~40 MW FiT requirement

Partially separate queue

- SDG&E procures an additional 10 MW of Share the Sun projects from a separate queue, but price is borrowed from FiT queue

Completely separate queue

- SDG&E procures an additional 10 MW of Share the Sun projects from a separate queue and price is determined by this separate Share the Sun queue
- *Note that SDG&E must pay the FiT price (or lower) for unsubscribed volumes in order to count them towards its FiT requirements*

Share the Sun: Power Purchase Agreement



- **Contract Capacity and Energy**

- Contract Capacity expressed as kilowatts, not to exceed 3,000 kW
- Demonstrated Contract Capacity,
- Contract Quantity or total kWh of energy produced is projected for each year of the term
- Seller required to deliver the Guaranteed Energy Production of 170% over 2 consecutive Contract Years during the Term. Basically, works out to 85% of Contract Quantity for each year

- **Credit and Collateral Requirements**

- Collateral Requirement is equal to \$20/kW for projects less than 1,000 kW
- Collateral Requirement is equal to \$50/kW for projects greater than or equal to 1,000 KW
- Requirement may be paid in cash or letter of credit
- Payment must be made within 30 days following the Execution Date

Share the Sun: Power Purchase Agreement



- **Contract Price**

- Determined by Re-MAT methodology
- Prices are adjusted by a Time of Day (TOD) factor

- **Commercial Operation Date**

- Expected Commercial Operation date; Guaranteed Commercial Operation Date no later than 24 months after execution date
- Approved Extension triggers payments of Daily Delay Liquidated Damages
- Extensions due to permitting or transmission delays may extend up to 6 months

Share the Sun: Power Purchase Agreement



- **Capacity, Resource Adequacy Benefits, and Green Attributes**
 - Seller assigns all Contract Capacity and Resource Adequacy to Buyer
 - Seller shall comply with all Resource Adequacy requirements of the CAISO
 - Seller will cooperate with buyer to obtain Capacity Attributes and RA Benefits
 - Project must be a CEC Eligible Renewable Energy Resource (ERR)
 - Compliance Expenditure Cap; expenses limited to \$25,000
 - Seller conveys all Green Attributes to Buyer (e.g. Renewable Energy Credits)

Share the Sun: Power Purchase Agreement



- **CAISO Agreements, Interconnection Agreements, and Scheduling**

- Participating Generator Agreement
- Meter Service Agreement and CAISO approved meter
- Interconnection Agreement
- CAISO ordered Curtailment
- Buyer curtailment rights

- **Transmission Costs and Permit Termination Rights**

- Buyer has the right to terminate if the Aggregate Network Upgrade Costs exceed \$300,000 (Network Upgrades Cap) unless Seller agrees to pay upgrade costs in excess of the Network Upgrades Cap
- Either Party may terminate if Seller has not obtained permits for construction and operation within 22 months after the Execution Date

Share the Sun: Useful FiT Links



- CPUC FiT Decision:
http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167679.PDF
- Joint IOU proposed FiT PPA:
<http://docs.cpuc.ca.gov/PublishedDocs/EFILE/RESP/171532.PDF>
- SDG&E FiT website:
<http://www.sdge.com/regulatory-filing/654/feed-tariffs-small-renewable-generation>
- SDG&E's proposed FiT Tariff:
<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M042/K158/42158585.PDF>

*connected.....to the sun:
Competitive Market Implications*



Additional potential competitive issues for discussion:

- Affiliate Participation
- Direct Access
- Other considerations?

SunRate: TURN's Incremental Cost Pricing Proposal from SF Workshops



- SDG&E procures additional capacity through RAM in advance of program launch
 - These new projects will eventually be used to serve SR customers
 - The existing portfolio will be used to serve SR customers until these new projects are constructed
- Pricing: SR customers will pay the price of the most expensive contract procured in the next RAM solicitation (the price of the “extra” RAM project procured for SunRate)

Benefits:

- Incremental renewable procurement
- Lower customer premium

Challenges:

- Procurement occurs before level of customer involvement is known
- Local RAM bids are scarce