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CITY ADMINISTRATION

## STAFF REPORT

### VERNON GAS & ELECTRIC DEPARTMENT

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**DATE:** January 20, 2015

**TO:** Honorable Mayor and City Council

**FROM:** Carlos Fandino Jr., Director of Vernon Gas & Electric *CF 1/15/15*

**RE:** Renewable Portfolio Standard Annual Status Report for Calendar Year 2014

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#### Recommendation

It is recommended that the City Council:

1. Find that the approval requested in this staff report is exempt under the California Environmental Quality Act (CEQA) in accordance with Section 15061(b)(3), the general rule that CEQA only applies to projects that may have an effect on the environment; and
2. Receive and acknowledge the annual Renewable Portfolio Standard ("RPS") Report for Calendar Year 2014 as presented by the Vernon Gas & Electric Department. This report is for informational purposes only. There is no fiscal impact.

#### Performance Summary

Vernon procured sufficient RPS resources equal to 22% of retail sales to meet compliance obligations for Calendar Year 2014. The compliance requirement for Calendar Year 2014 is 20% of retail sales. The primary resources were Vernon's long-term biomethane contracts. Additional short-term wind contracts for eligible renewable resources and unbundled RECs were purchased to cover a portion of the compliance obligations for Calendar Year 2014.

#### Vernon's RPS Procurement Status for Calendar Year 2014

Pursuant to Vernon's RPS Procurement Plan and Enforcement Program, action has been taken to acquire renewable energy during Calendar Year 2014. The following is a brief description of renewable resources used to meet compliance requirements.

##### ***Biomethane***

Consistent with the RPS eligibility criteria, the City identified use of biomethane fuel at the MGS plant as a portfolio Content Category 1 resource. Element Markets and Clean Energy have both

### Category 1 Wind Resources

The City procured 50,000 MWh of short-term wind resources to make up for the biomethane delivery shortfall. These wind resources were Category 1 (energy bundled with environmental green attributes) consistent with SB X1 2 requirements.

### Renewable Energy Credits (RECs)

The City also purchased renewable energy and RECs to satisfy the SB X1 2 requirements. RECs are tradable, non-tangible energy commodities that represent proof that one megawatt-hour (MWh) of electricity was generated from naturally replenishing (renewable) resources such as modern biomass, wind, solar, geothermal, and biofuels. The City purchased 34,000 MWh of unbundled renewable energy credits during Calendar Year 2014.

The following table provides an overall assessment of VG&E renewable resources and RPS requirements during Calendar Year 2014.

Table 1: RPS Compliance Status Report in 2014

	Calendar Year 2014													Total
	RPS Compliance Status Report													
	January	February	March	April	May	June	July	August	September	October	November	December		
Retail Load (MWh)	90,762	83,716	91,146	91,345	95,947	94,427	100,311	99,633	96,931	99,979	88,813	87,879	1,120,890	
Compliance Target %													20.0%	
RPS Requirements (MWh)													224,178	
RPS Resources														
Biomethane Contracts (MMBtu)	113,505	92,300	96,273	43,749	45,938	65,567	51,357	74,629	318,488	125,171	106,393	116,467		
Biomethane (MWh Equiv.)	14,552	11,833	12,343	5,609	5,889	8,406	6,584	9,568	40,832	16,048	13,640	14,932	160,236	
Wind (PCC1) RECs								4,331	7,645	12,751	14,849	10,424	50,000	
											34,000		34,000	
Resources	14,552	11,833	12,343	5,609	5,889	8,406	6,584	13,899	48,477	28,799	62,489	25,356	244,236	
Annual Compliance %													RPS Target	RPS Actual
													20.0%	21.8%
Portfolio Content Category														
Compliance														
Category 1 and Category 2													85.0%	93.8%
Category 3													15.0%	15.2%
Excess /(Shortfall) (MWh)														20,057

Note: The Excess of RPS procurement will be carried over to meet future compliance requirements.

### Summary of Procurement Plan to meet RPS Requirements in the Future

The City of Vernon intends to meet all future procurement targets, barring any events and occurrences that are beyond the City's control. Vernon will seek to develop a diverse RPS portfolio, with a combination of landfill gas, solar PV, and other renewable resources, based on the forecasted need for additional energy resources, as well as the economics and timing of any particular projects.

In order to meet the RPS mandates, Vernon plans to preserve its existing renewable resources, carry forward excess procurement from one compliance period to the next, and look for timely and economic opportunities to diversify and expand its RPS portfolio, while protecting Vernon's customers from excessive rate increases that could jeopardize economic growth and viability within the City.

secured a contract to deliver biomethane fuel to Vernon. The initial contract year for Element Markets was March 2, 2012. Under existing Transaction Confirmation Numbers 1 & 2, the City receives from Element Markets approximately 2,500 MMBtu/day of biomethane and/or biomethane equivalent renewable energy. Element Markets has a 10-year contract to assist the City in meeting California Renewable Portfolio Standard. Due to CEC's suspension of RPS eligibility of out-of-state biomethane on March 28, 2012 and adoption of Assembly Bill 2196, which restricts the eligibility of out-of-state biomethane with the exception of sources injecting biomethane into a common carrier pipeline by April 1, 2014, and some Element Markets' biomethane projects could not be completed prior to August 1, 2014, Element Markets was not able to provide the entire contract quantity of biomethane to the City. As a result, the City and Element Markets amended the biomethane agreements to provide for delivery of replacement product (power) to satisfy the shortfall in delivering biomethane.

The City also receives from Clean Energy approximately 1,875 MMBtu/day of biomethane under existing Transaction Confirmation Number 1. Clean Energy is obligated to deliver a minimum quantity of biomethane over the course of a contract year (excluding from the calculation any days on which Force Majeure affected seller's performance) equivalent to 75% of the contract quantity. The initial contract year was August 1, 2013 through July 31, 2014, and future contract years start July 1<sup>st</sup> of each year. Clean Energy has also entered into a 10-year contract with the City to deliver biomethane fuel. Uncertainties arose due to the following events that have prevented Clean Energy from delivering contract amounts by December 2014. Continued freeze events in December 2013 and January 2014 have prevented or constrained production at the plant, and have also incurred pipeline outages preventing delivery. The unusually severe winter weather continued to impact and constrain production at their facility at least through the first week of May 2014. In addition, commercial operation of a new project was delayed due to technical issues. The following table illustrates biomethane deliveries by the suppliers for Calendar Year 2014.

Table 2: Biomethane Deliveries by Suppliers for Calendar Year 2014

Supplier	Contract Volume (MMBtu)	Actual Delivery (MMBtu)	Difference	
			MMBtu	%
<b>Element Markets</b>	912,500	883,805	(28,695)	-3.1%
<b>Clean Energy</b>	684,375	366,032	(318,343)	-46.5%
<b>Total</b>	<b>1,596,875</b>	<b>1,249,837</b>	<b>(347,038)</b>	<b>-21.7%</b>

Because of these shortfall biomethane deliveries, Vernon entered into additional short term renewable contracts such as wind energy to meets its compliance procurement quantity targets for Calendar Year 2014.

In accordance with state regulations, a minimum of 50%-75% of RPS procurement used for compliance must meet the established requirements for Bucket 1, which for most practical purposes means use of bundled energy from California sited renewable power plants. Existing Bucket 1 resources are in limited supply, and it typically takes from three to five years to construct a new utility-scale renewable generation project. Vernon works with the Southern California Public Power Authority (SCPPA) to gain greater access to a broader pool of renewable resources, through a competitive renewable procurement bidding process, which would otherwise be difficult to leverage as a result of VG&E's size.

The City has acquired multi-year contracts for solar and landfill gas power generation to satisfy the new RPS requirements as required by the State of California and SB X1 2. If these renewable resources that are expected to come on-line in 2017 are added into the supply portfolio over the next three years, the proportion supplied by bundled renewable energy will increase during the planning period and displace purchase of unbundled RECs. Additional bundled renewable energy sources (potential renewables) as of yet unplanned, will contribute towards meeting Vernon's long term goal of 33% renewable energy supply.

The following is a brief description of future renewable contracts entered in 2014.

#### ***Astoria Phase II Solar Project***

Astoria II LLC has entered into a long-term power purchase agreement with SCPPA to build a Solar Photovoltaic facility that has a net capacity of approximately 175 megawatts of electricity. This contractual arrangement is basically considered firm generation, which is jointly owned with other municipal partners. By leveraging this asset with our municipal partners the City achieves the critical mass needed to build a large project/or contract. This strategy practice reduces construction, financing, and operation costs and lets us achieve economies of scale and obtain the most favorable financing rates.

The project located in Kern County will be available for commercial operation by December 31, 2016 with SCPPA taking control of 75 MW power produced. The City of Vernon, in conjunction with other 5 municipal utilities from SCPPA, is participating in the PPA to purchase the facility energy for 20 years. The City Council has approved a power purchase agreement (through SCPPA) with Astoria for its renewable energy that will entitle Vernon to 20 MW of capacity for the period of January 2017 to December 2021, and 30 MW for the remainder contract period of January 2022 to December 2036.

#### ***Puente Hills Gas to Energy Project***

Puente Hills landfill gas station was constructed by Los Angeles County Sanitation District in the 1980s; this facility is located in Southeastern Los Angeles County, near Vernon service area. It has been in full commercial operation since January 1987 and has remained on-line 95 percent of the time. The facility produces approximately 46 MW capacity.

The Puente Hills Gas-to-Energy facility is a conventional Rankine Cycle Steam Power Plant using landfill gas (LFG) as fuel to generate electricity. LFG is fired in the plant's boilers producing superheated steam. The superheated steam is used to drive the steam turbine/generator to generate electric power.

The City (through SCPPA, a utility group) has entered into a power purchase agreement for 10 megawatts of renewable power from the Puente Hills Landfill Gas-to-Energy Facility beginning January 1, 2017 and ending on December 31, 2030.

## **Background**

On April 12, 2011, Governor Edmund G. Brown, Jr. signed into law the California Renewable Energy Resources Act, Senate Bill 2 of the First Extraordinary Session (“SBx1 2”) requiring all load serving entities in California to achieve a 33% Renewable Portfolio Standard (“RPS”) by 2020. Additionally, SBx1 2 required each publicly owned utility such as the City of Vernon (“Vernon”) to develop a procurement plan and to adopt an enforcement program (by 1/1/2012). The legislation became law effective January 1, 2012. It was again amended effective January 1, 2013.

### ***City of Vernon Renewable Portfolio Standards***

#### **SB 1078**

In 2002, Senate Bill 1078 (“SB 1078”) implemented a RPS with a goal of providing 20 percent of the energy sold to retail customers be generated using eligible renewable resources by 2017. Pursuant to SB 1078, the City Council adopted Resolution 8511 on August 4, 2004, which established for Vernon a goal of serving 20 percent of Vernon’s load with “eligible” renewable energy resources by 2017.

Under SB 1078, the governing board of a local publicly owned electric utility is responsible for implementing and enforcing a renewable portfolio standard for the utility that recognizes the intent of the Legislature to encourage utilization of renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement.

The legislation requires that the RPS include a determination of what resources qualified as renewable, the percentage of total energy resources that would be renewable and a timetable for meeting the goals. SB 1078 does not include a specific definition of renewable resources for municipal utilities, but instead delegates this responsibility to the governing board of each municipal. SB 1078 establishes the CEC as the Certified agency for renewable resources and requires the CEC to establish a tracking mechanism for renewable energy credits to insure that renewable energy output is counted only once for RPS standards. SB 1078 was superseded by the passage of SB X1 2 in 2011.

#### **SBx1 2**

In the ongoing effort to codify the 33 percent by 2020 goal, SBx1 2 was signed by Governor Edmund G. Brown, Jr., in April 2011. SBx1 2 revised the RPS Program to state the intent of the Legislature to increase the amount of electricity generated from eligible renewable energy resources per year, so that amount equals at least 33 percent of total retail sales of electricity in California per year by December 31, 2020.

This bill makes the requirements of the RPS program applicable to local publicly owned electric utilities, except that the utility’s governing board is responsible for implementing those requirements. However, certain enforcement authority with respect to local publicly owned

electric utilities was given to the Energy Commission and State Air Resources Board. Further, the bill required that the governing board of each local publicly owned electric utility adopt an enforcement program on or before January 1, 2012. The Light & Power Department formulated a plan to address all legal provisions and this proposed program was adopted by Council via Resolution 2012-02 on January 3, 2012, thereby implementing Vernon’s SBx1 2 Compliance Plan.

**Vernon’s SBx1 2 Compliance Plan**

The existing SBx1 2 Compliance Plan represents Vernon’s commitment to renewable energy procurement consistent with the legislative intent of SBx1 2 to ensure the development of a procurement plan and the adoption of an enforcement program. Some of the major provisions are as follows:

- Procurement Targets – SBx1 2 calls for interim targets that must be attained. There are three compliance periods (“CPs”). The first compliance period covers 2011 through 2013 (“CP1”). The second period covers 2014 through 2016 (“CP2”). The third period covers 2017 through 2020 (“CP3”). CP1 has a compliance target of 20% by December 31, 2013. CP2’s target is 25% by the end of CP2. CP3’s target is 33 percent by the end of CP3. After 2020, the procurement target is 33 percent. Consistent with the legislation, Vernon will increase procurement of electricity from eligible renewable resources, including renewable energy credits, to meet the target objectives. The following table summarizes these requirements.

Table 2: RPS Compliance Periods

Compliance Periods	Mandated Renewable (% of Retail Sales)
Compliance Period 1 (2011-2013)	2011 Retail Sales: 20%
	2012 Retail Sales: 20%
	2013 Retail Sales: 20%
Compliance Period 2 (2014-2016)	2014 Retail Sales: 20%
	2015 Retail Sales: 20%
	2016 Retail Sales: 25.0%
Compliance Period 3 (2017-2020)	2017 Retail Sales: 27.0%
	2018 Retail Sales: 29.0%
	2019 Retail Sales: 31.0%
	2020 Retail Sales: 33.0%

- Portfolio Categories – SBx1 2 establishes three categories of renewable energy resources and sets minimum and maximum levels of each category of resource that can be included in a utility’s renewable portfolio for each compliance period. A series of tests is applied to each renewable energy resource, based on the physical characteristics of the generation facility and on the contract terms under which the utility procures the product(s), to determine in which category a resource is classified.

The first resource category is bundled renewable energy resources (i.e. energy and environmental attributes) connected to or scheduled into a California Balancing

Authority. Resources located outside of California, and which are not directly scheduled into a California Balancing Authority, are not eligible to be categorized as renewable resources in this category.

The second category is renewable energy resources that are firmed and shaped with energy that is new to California (i.e. not purchased from a source already within California).

The third category is any product that fails to meet the conditions of categories 1 or 2, including transactions for Renewable Energy Credits (discussed below) with no electricity associated with them.

The statute mandates that 50% of the renewable energy used for compliance must initially come from the first category (i.e. connected to or scheduled into a California balancing authority). The portion of energy which must come from this category increases over time. The use of resources from the third category is initially capped at 25%, with that cap decreasing over time. Resources from the second category may be used to satisfy the remainder of the renewables requirement. These mandates and their changes are tied directly to the “compliance periods” described above. The portfolio balance mandates are summarized in the following table.

Table 2: RPS Compliance Categories

<b>Compliance Period</b>	<b>Category 1 Bundled Green Must Be At Least</b>	<b>Category 2 Bundled Firmed &amp; Shaped (has no direct restriction)</b>	<b>Category 3 Unbundled/RECs Cannot Exceed</b>
2011-2013	50%	25%	25%
2014-2016	65%	20%	15%
2017-2020+	75%	15%	10%

- Enforcement Program – The legislation required the City Council to adopt an enforcement program and, effective January 3, 2012, pursuant to Resolution 2012-02, City Council approved the implementation of Vernon’s Compliance Plan.

**Fiscal Impact**

This report is for informational purposes only. There is no fiscal impact.