



R I V E R S I D E P U B L I C U T I L I T I E S

11-IEP-1G

**DOCKET**

11-IEP-1H

DATE Jun 22 2011

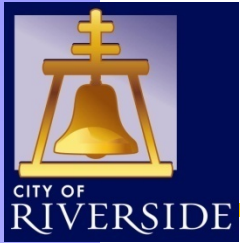
RECD. Jun 29 2011

# California Energy Commission DG IEPR Workshop June 22, 2011

WATER | ENERGY | LIFE



PUBLIC UTILITIES



## *ELECTRIC SYSTEM STATISTICS*

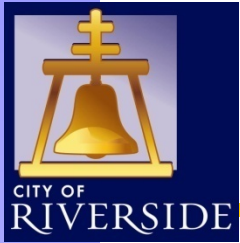
- **106,000 Customers**
- **Peak 625 MW (summer)**
- **1200 Miles of Lines**
- **23,000 Poles**
- **30,000 Street Lights -**
- **7500 Overhead Transformers**
- **6200 Underground Transformers**
- **15 Substations**
- **60 Mile of Fiber Optic Cable**
- **240 MW of Internal Generation**



## *ENERGY DELIVERY RESPONSIBILITIES*

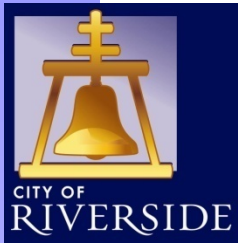
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- **Engineering, Construction, Operation, and Maintenance**
- **Grid to Meter**
- **Transmission, Substation, Distribution, Street Lights, Communications**
- **225 Employees**
- **Consultants and Contractors**
- **87 Square Mile Service Territory**



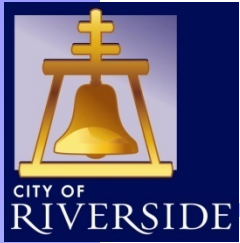
# *PLANNING FOR THE FUTURE*





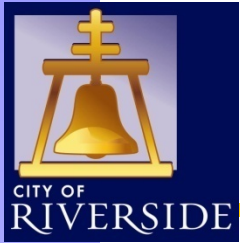
# *PROPOSED CIP FY 2012-2016 ELECTRIC* *(in millions)*

	Proposed	-----Planning Purposes-----				Total
	11-12	12-13	13-14	14-15	15-16	
Engineering Pre-Design	\$ 3.7	\$ 3.2	\$ 2.6	\$ 2.9	\$ 3.0	\$ 15.4
Transformers	\$ 6.1	\$ 5.0	\$ 3.3	\$ 5.0	\$ 5.0	\$ 24.4
Reliability	\$ 4.4	\$ 5.2	\$ 4.7	\$ 4.8	\$ 4.9	\$ 24.0
New Customers	\$ 3.9	\$ 4.5	\$ 4.8	\$ 4.8	\$ 4.9	\$ 22.9
San Onofre Capital Program	\$ 4.5	\$ 4.6	\$ 4.2	\$ 4.0	\$ 3.4	\$ 20.7
Substations	\$ 4.0	\$ 1.0	\$ 0.6	\$ 1.4	\$ 2.7	\$ 9.7
Major Feeders	\$ 1.6	\$ 3.3	\$ 2.2	\$ 3.5	\$ 3.1	\$ 13.7
OH to UG Conversions	\$ 1.7	\$ 1.7	\$ 1.7	\$ 1.7	\$ 1.7	\$ 8.5
System Operational Improvement	\$ 2.0	\$ 2.0	\$ 2.6	\$ 1.1	\$ 1.2	\$ 8.9
Caltrans SR-91 HOV	\$ 0.1	\$ 0.1	\$ 0.1	\$ -	\$ -	\$ 0.3
Facility & System Improvement	\$ 3.1	\$ 0.5	\$ 0.5	\$ 0.4	\$ 0.3	\$ 4.8
Street Lighting Projects	\$ 0.8	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.2	\$ 5.6
Special Projects	\$10.8	\$13.3	\$10.7	\$ 2.4	\$ 2.4	\$ 39.6
<b>Sub-Total</b>	<b>\$46.7</b>	<b>\$45.6</b>	<b>\$39.2</b>	<b>\$33.2</b>	<b>\$33.8</b>	<b>\$198.5</b>
<b>Total</b>	<b>\$46.7</b>	-----\$151.80-----				<b>\$198.5</b>



# *ELECTRIC SYSTEM MASTER PLAN*

- **Assessment of system planning criteria and methodologies**
- **Adequacy of fixed and mobile communications systems;**
- **Adequacy and the need for integration of all major existing engineering and business data systems**
- **Assessment of system losses - provide cost/benefit for reduction**
- **Assessment of the future power factor requirements**
- **Recommendations for future DA**
- **Assessment of the current emergency response plans/system restoration capabilities**
- **Recommendations for outage notification/management systems,**
- **Assessment of the current Asset Management Plan**



# *INTERCONNECTING DG TO THE DISTRIBUTION SYSTEM*





# *DISTRIBUTED GENERATION INTEGRATION*

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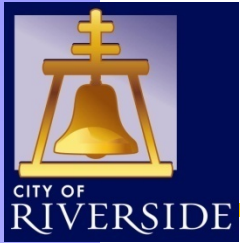
- **Where will DG show up?**
  - Clustering
  - Outskirts of the system
- **When will DG show up?**
- **Why will DG show up?**
  - Incentives
  - Private Investment
  - Federal/State/ASMD Programs
- **Which DG will show up?**
  - Large vs. Micro Scale





## *PLAN FOR THE UNKNOWNNS*

- **Rule “22” in place**
- **Other Rules/Rates Needed?**
- **WDAT >1000kW**
  - Costs For Studies
  - Lengthy Process
  
- **Planning/Analysis Tools Appropriate**
- **Costs Unknown – Large Scale Adoption**
  - System Integration
  - Processes



# *SMART GRID EFFORTS*



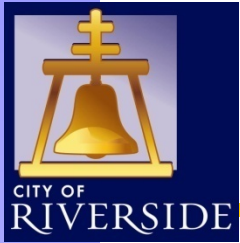


## *MEETING OUR CUSTOMER'S NEEDS*

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- **AMI, Demand Response?**
  - Energy small and unnoticed part of most household expense
  - Value Added
  - Picking Eager Customers/Large Indifferent Crowd
- **Meeting the Spirit of SB 17 (Padilla)**
  - We have a Plan
- **Electric Vehicle Readiness**
- **Fiber & WiFi “Rich”**
- **Grid Reliability, Security and Resiliency**
- **Focus on Undeniable Important Technologies**
  - SAS, DA, SCADA





*Q & A*

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