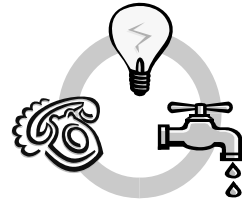


INDUSTRY PUBLIC UTILITIES COMMISSION CITY OF INDUSTRY

REGULAR MEETING AGENDA
OCTOBER 8, 2015 8:30 A.M.



President Mark D. Radecki
Commissioner Abraham N. Cruz
Commissioner Roy Haber, III
Commissioner Cory C. Moss
Commissioner Newell W. Ruggles



Location: City Council Chamber, 15651 East Stafford Street, City of Industry, California

Addressing the Commission:

- ▶ **Agenda Items:** Members of the public may address the Commission on any matter listed on the Agenda. Anyone wishing to speak to the Commission is asked to complete a Speaker's Card which can be found at the back of the room and at the podium. The completed form should be submitted to the City Clerk prior to the Agenda item being called and prior to the individual being heard by the Commission.
- ▶ **Public Comments (Non-Agenda Items):** Anyone wishing to address the Commission on an item not on the Agenda may do so during the "Public Comments" period. In order to conduct a timely meeting, there will be a three-minute time limit per person for the Public Comments portion of the Agenda. State law prohibits the Commission from taking action on a specific item unless it appears on the posted Agenda. Anyone wishing to speak to the Commission is asked to complete a Speaker's Card which can be found at the back of the room and at the podium. The completed card should be submitted to the City Clerk prior to the Agenda item being called and prior to the individual being heard by the Commission.

Americans with Disabilities Act:

- ▶ In compliance with the ADA, if you need special assistance to participate in any City meeting (including assisted listening devices), please contact the City Clerk's Office (626) 333-2211. Notification of at least 48 hours prior to the meeting will assist staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting.

Agendas and other writings:

- ▶ In compliance with SB 343, staff reports and other public records permissible for disclosure related to open session agenda items are available at City Hall, 15625 East Stafford Street, Suite 100, City of Industry, California, at the office of the City Clerk during regular business hours, Monday through Friday 9:00 a.m. to 5:00 p.m. Any person with a question concerning any agenda item may call the City Clerk's Office at (626) 333-2211.
-

1. Call to Order
2. Flag Salute
3. Roll Call
4. Public Comments

5. **BOARD MATTERS**

5.1 Consideration of Register of Demands.

RECOMMENDED ACTION: Approve the Register of Demands and authorize the appropriate City Officials to pay the bills.

5.2 Consideration of the minutes of the August 13, 2015 regular meeting.

RECOMMENDED ACTION: Approve as submitted.

5.3 Report from General Manager for the La Puente Valley County Water District.

RECOMMENDED ACTION: Receive and file the report.

5.4 Presentation of the report regarding the 66kV substation at 208 S. Waddingham Way, and discussion and recommendation regarding energizing the Substation.

RECOMMENDED ACTION: Request that the City Council set November 15, 2015 as the in-service date for energizing the substation.

6. Adjournment. Next regular meeting: Thursday, November 12, 2015 at 8:30 a.m.

INDUSTRY PUBLIC UTILITIES COMMISSION

ITEM NO. 5.1

Industry Public Utilities Commission
Authorization For Payment of Bills
Meeting of October 8, 2015

<u>FUND</u>	<u>DESCRIPTION</u>	<u>DISBURSEMENTS</u>
560	Industry Public Utilities	31,464.62
	TOTAL ALL FUNDS	31,464.62

<u>BANK</u>	<u>NAME</u>	<u>DISBURSEMENTS</u>
BOFA	Bank of America	31,464.62
	TOTAL ALL BANKS	31,464.62

**Industry Public Utilities Commission
Board Meeting
October 8, 2015**

Check	Date		Payee Name	Check Amount
IPUC.CHK - IPUC Water BofA Checking				
40247	09/09/2015		SO CALIFORNIA EDISON COMPANY	\$26,644.72
	Invoice	Date	Description	Amount
	2016-00000244	09/01/2015	07/31-08/31/15 SVC - 1991 WORKMAN MILL U	\$26,644.72
40248	10/08/2015		CNC ENGINEERING	\$156.88
	Invoice	Date	Description	Amount
	43928	09/24/2015	ON-CALL WATER SYSTEM MAINT PROGRAM	\$156.88
40249	10/08/2015		INDUSTRY PUBLIC UTILITIES	\$1,400.00
	Invoice	Date	Description	Amount
	SEP-15	09/29/2015	REIMBURSE PAYROLL - SEPTEMBER 2015	\$1,400.00
40250	10/08/2015		ROWLAND WATER DISTRICT	\$3,263.02
	Invoice	Date	Description	Amount
	I-08312015-A	09/02/2015	CONTRACT SVC - AUGUST 2015	\$1,877.50
	I-08312015-B	09/02/2015	CONTRACT SVC - AUGUST 2015	\$1,385.52

Checks	Status	Count	Transaction Amount
	Total	4	\$31,464.62

INDUSTRY PUBLIC UTILITIES COMMISSION

ITEM NO. 5.2

INDUSTRY PUBLIC UTILITIES COMMISSION
REGULAR MEETING MINUTES
CITY OF INDUSTRY, CALIFORNIA
AUGUST 13, 2015
PAGE 1

CALL TO ORDER

The Regular Meeting of the Industry Public Utilities Commission of the City of Industry, California, was called to order by President Mark D. Radecki at 8:30 a.m. in the City of Industry Council Chamber, 15651 East Stafford Street, California.

FLAG SALUTE

The flag salute was led by President Mark D. Radecki.

ROLL CALL

PRESENT: Mark D. Radecki, President
Cory C. Moss, Commissioner
Roy Haber, Commissioner
Jeff Parriott, Commissioner
Newell W. Ruggles, Commissioner

STAFF PRESENT: Paul J. Philips, Executive Director; James M. Casso, General Counsel; John Ballas, Engineer; and Cecelia Dunlap, Assistant Secretary.

PUBLIC COMMENTS

There were no public comments.

CONSIDERATION OF REGISTER OF DEMANDS

MOTION BY COMMISSIONER HABER, AND SECOND BY COMMISSIONER PARRIOTT TO APPROVE THE REGISTER OF DEMANDS AND AUTHORIZE THE APPROPRIATE CITY OFFICIALS TO PAY THE BILLS. MOTION CARRIED 5-0.

CONSIDERATION OF THE MINUTES OF THE JUNE 11, 2015 REGULAR MEETING

MOTION BY COMMISSIONER MOSS, AND SECOND BY COMMISSIONER RUGGLES TO APPROVE THE MINUTES AS SUBMITTED. MOTION CARRIED 5-0.

REPORT FROM GENERAL MANAGER FOR THE LA PUENTE VALLEY COUNTY WATER DISTRICT

General Manager Galindo presented a report to the Commission.

INDUSTRY PUBLIC UTILITIES COMMISSION
REGULAR MEETING MINUTES
CITY OF INDUSTRY, CALIFORNIA
AUGUST 13, 2015
PAGE 2

ADJOURNMENT

There being no further business, the Industry Public Utilities Commission adjourned at 8:48 a.m.

MARK D. RADECKI
PRESIDENT

CECELIA DUNLAP
ASSISTANT SECRETARY

INDUSTRY PUBLIC UTILITIES COMMISSION

ITEM NO. 5.4



INDUSTRY PUBLIC UTILITIES COMMISSION

P.O. BOX 3366 • CITY OF INDUSTRY • CALIFORNIA 91744
(626) 333-2211 • Fax (626) 961-6795 • www.cityofindustry.org

Mark D. Radecki, President
Roy M. Haber, Commissioner
Cory C. Moss, Commissioner
Jeff L. Parriott, Commissioner
Newell W. Ruggles, Commissioner

Paul J. Philips, Public Utilities Director
James M. Casso, General Counsel
Cecelia Dunlap, Assistant Secretary

MEMORANDUM

To: Honorable President and Commission Board Members

From: Paul J. Philips, Public Utilities Director

Staff: John Ballas, City Engineer

Date: September 30, 2015

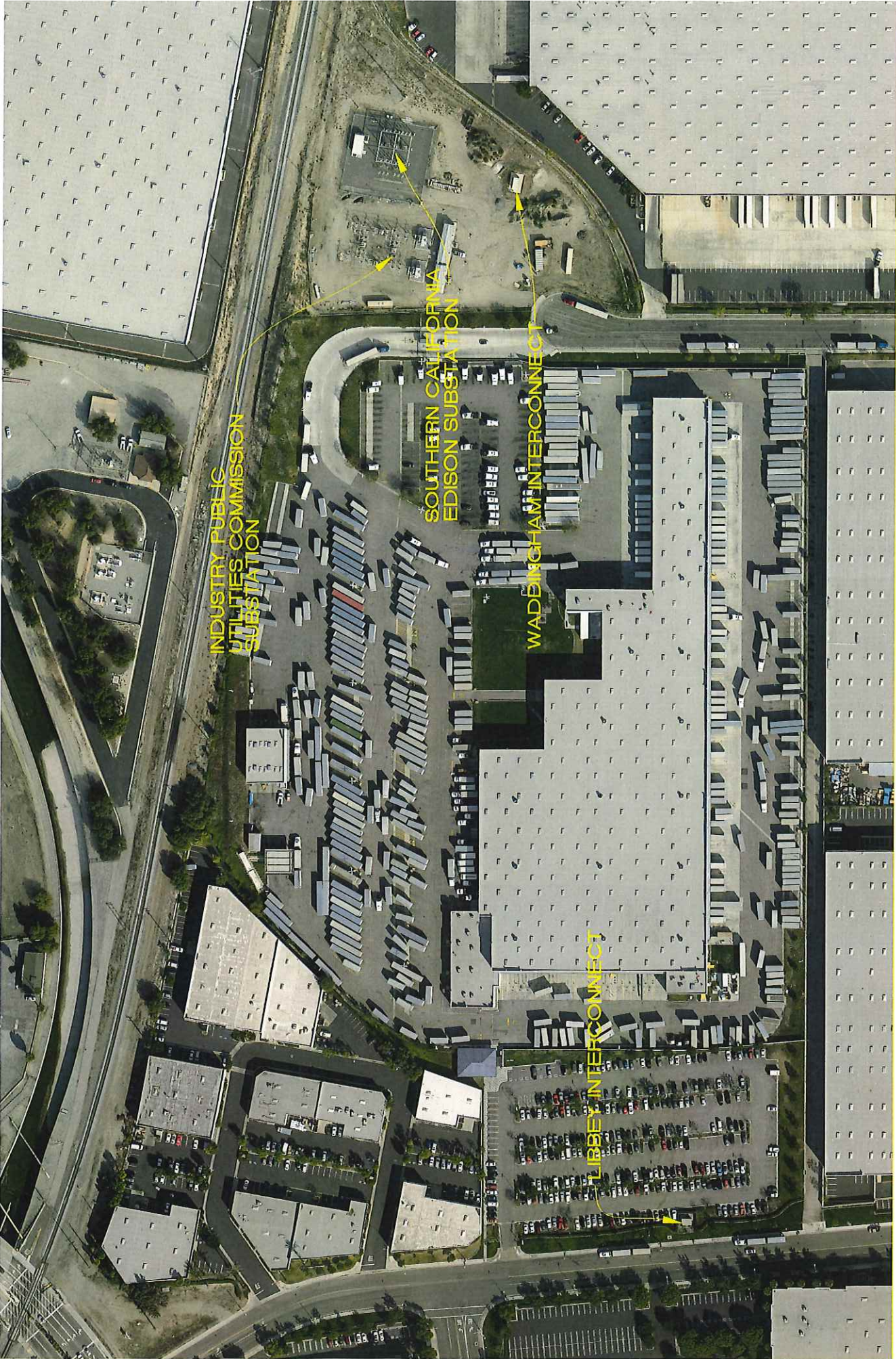
SUBJECT: 66Kv Substation at 208 So. Waddingham Way

Attached for your consideration is a cost comparison, prepared by Richard Mrlik of Intertie, evaluating the option to energize the 66Kv substation at this time, or waiting several years until buildings are constructed at the nearby Industry Business Center (IBC). Presently, customers are served from two (2) 12Kv switchgear interconnections with Southern California Edison (SCE), as shown on the attached aerial map and pictures. One interconnection is located on Old Ranch Road and the second interconnection is on the same site as the substation. These interconnections are sufficient to serve the existing load and will remain in place until the 66Kv substation is energized. Afterwards, each 12Kv switchgear will then be de-energized and stored for future use.

As described in the report, the City would recognize an annual savings of about \$9,400.00 by not energizing the 66Kv substation at this time. Should the substation remain idle for an extended period of time, SCE would require that the City perform third party testing of the substation prior to being energized. This required testing and commissioning reporting was recently completed at a cost of \$98,000.00. Such re-testing costs would offset any savings in leaving the substation idle. In addition, the report recommends energizing the substation to take full advantage of the twelve (12) month warranty period provided in the contract with Southern Contracting. By energizing the substation, all of the equipment would be placed in service, transformers would operate under load conditions with any warranty repairs at the expense of the contractor.

Staff recommends that the Commission request that the City Council set November 15, 2015, as the "in-service" date for energizing the 66Kv substation. This will give sufficient advance notice to all involved parties. Additional proposals for site monitoring, monthly inspections, annual testing, and emergency call-out and repairs will be solicited and placed on the City Council agenda on November 12, 2015.

PJP:JDB:mk



INDUSTRY PUBLIC UTILITIES COMMISSION SUBSTATION

SOUTHERN CALIFORNIA EDISON SUBSTATION

WADBINGHAM INTERCONNECT

LIBBEY INTERCONNECT



LIBBEY 12KV INTERCONNECTION



WADDINGHAM 12KV INTERCONNECTION



WADDINGHAM

MEMO

Attention: Mr. John Ballas
Subject: When to Energize the 66 kV Substation
Date: September 18, 2015

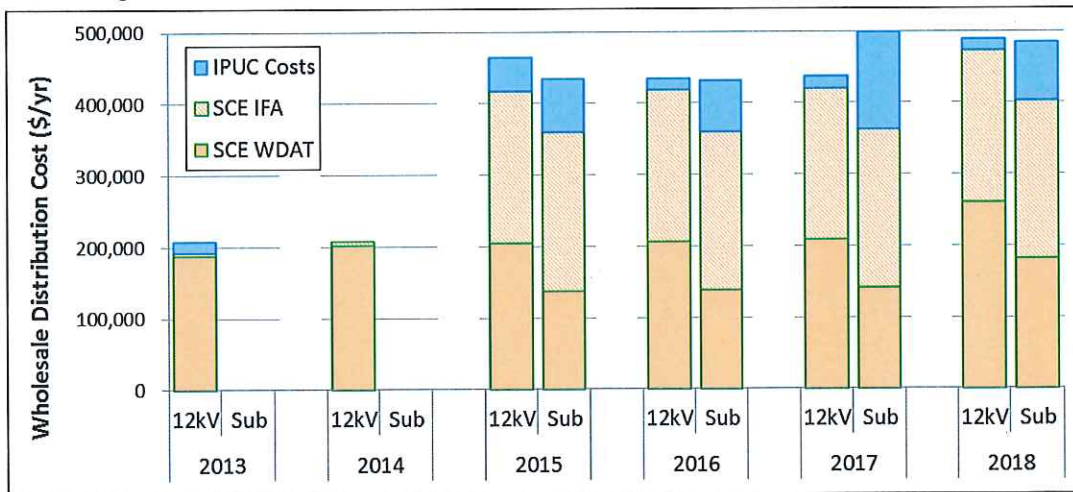
Summary

The City is deciding when to interconnect its new Waddingham Substation to Southern California Edison’s (SCE) 66 kV grid. IPUC currently serves the Grand Crossing area via two 12 kV interconnections to SCE’s 12 kV grid, the most cost-effective way to serve existing loads. Future Industry Business Center loads will require the City to interconnect at 66 kV and serve the Grand Crossing area via the City-owned 66/12 kV substation. To accommodate future loads, the City has constructed and tested its 66/12 kV substation and paid for SCE-installed 66 kV interconnection facilities and wholesale distribution upgrades. This memo reviews key factors including operating costs, reliability and timing issues that address when the City should energize the substation.

Impact on Operating Costs

Illustrated in Figure 2 in the Appendix, IPUC buys power in the wholesale market and transports this power over wholesale distribution facilities to its retail distribution system. IPUC’s cost to move power from the market to its system, or wholesale distribution costs, combine SCE Contract costs for SCE facilities and IPUC costs. IPUC leases SCE distribution facilities per Wholesale Distribution Access Tariff (WDAT) terms and pays for SCE-installed facilities and upgrades per Interconnection Facilities Agreement (“IFA”) terms. IPUC incurs costs to operate and maintain (“O&M”) its wholesale distribution facilities. Figure 1 below compares IPUC wholesale distribution costs to serve Grand Crossing for the current two 12 interconnections versus energizing the 66 kV substation.

Figure 1: IPUC Historical and Pro Forma Wholesale Distribution Cost



At Grand Crossing, IPUC transports wholesale power on SCE-owned 66 kV and 12 kV facilities to two IPUC-owned 12 kV interconnections as shown in the left-hand side of Figure 2. Prior to 2015, IPUC paid SCE WDAT charges for two 12 kV WDATs and

modest SCE IFA charges because 12 kV interconnects require limited SCE facilities. This arrangement provides the lowest wholesale distribution cost to serve Grand Crossing.

To serve future loads from the 600-acre development, IPUC constructed the Waddingham 66 kV Substation, which required SCE to install interconnection facilities and upgrade its distribution system. Since SCE completed facilities on its side of the substation, IPUC pays SCE \$207,230 per year for SCE IFA Facilities charges, whether the substation is energized or not. The large increase in IPUC's 2015 wholesale distribution costs is due to SCE's IFA Facility Charges, despite receiving power from the same 12 kV interconnects. When factoring in deferred maintenance on the two 12 kV switchgear described in Table 4, 2015 costs will be higher for the 12 kV versus the substation, but lower over 3 years.

By energizing the substation, IPUC will interconnect to SCE's 66 kV system as shown on the right-hand side of Figure 2. IPUC will continue to pay SCE IFA Facilities Charges and will pay lower SCE WDAT charges because less SCE facilities are required for 66 kV service. IPUC direct costs will increase with the substation due to physical energy losses and higher O&M costs, detailed by vendor in Table 3.

Table 1 compares wholesale distribution costs to serve Grand Crossing over a three-year maintenance cycle for the current 12 kV vs energizing the substation. Table 2 in Exhibit 1 details these costs from 2013 to 2018. The net wholesale distribution cost increase from energizing the substation is estimated to average \$9,415 per year as shown below.

Table 1: IPUC Wholesale Distribution Costs - Prior, Current 12 kV & Post Substation

	Pre-2014 12 kV	Current 12 kV	Substation 66 kV	ΔCost Startup Sub
<i>SCE Wholesale Distribution Charges</i>				
WDAT Contract Losses	\$ 93,280	\$ 93,280	\$ 37,972	\$ (55,308)
WDAT Demand Charges	\$ 111,486	\$ 111,486	\$ 99,201	\$ (12,286)
IFA Facilities - Distribution	\$ -	\$ 90,932	\$ 90,932	\$ -
IFA Facilities - Interconnection	\$ 4,616	\$ 120,914	\$ 131,040	\$ 10,126
<i>IPUC-Owned Facilities Costs</i>				
Operations & Maintenance ¹	\$ 16,000	\$ 26,667	\$ 84,333	\$ 57,667
Substation Losses			\$ 9,216	\$ 9,216
TOTAL WHSL. DSTR. COSTS	\$ 225,382	\$ 443,279	\$ 452,694	\$ 9,415
<i>Cost per MWh</i>	<i>\$ 6.85</i>	<i>\$ 13.47</i>	<i>\$ 13.75</i>	<i>\$ 0.29</i>

¹O&M average cost over 3-year period

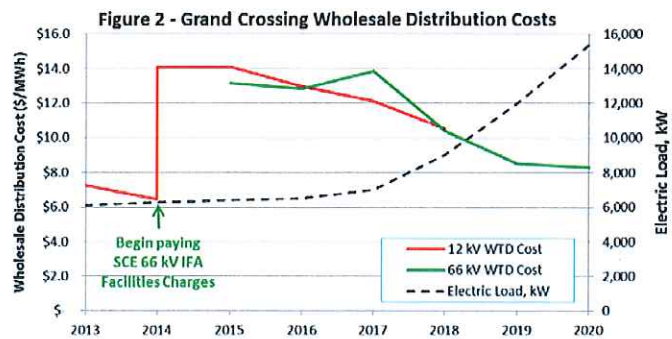
Reliability Considerations

The City's utility currently receives 6.4 MW of electric power at Libby and Waddingham 12 kV interconnections and distributes the power to 73 customers and 16 City accounts. Since July 2014, these interconnections experienced 6 outages – all were caused by SCE problems and outages on SCE's 12 kV feeders. The City's electrical design engineer states that 'if IPUC were not connected to the SCE 12 kV circuits during this period and instead received power via the 66 kV substation, IPUC customers would not have experienced any of the outages'. The IPUC cost of outage response for the one year period from July 1, 2014 thru June 30, 2015 was \$5,380.

Load Growth Benefit

Small wholesale loads such as IPUC's service at Grand Crossing are most cost-effective served via 12 kV interconnections under SCE WDAT contracts. Without any load increase, paying for facilities completed on SCE's side of the substation added \$6/MWh (0.6

¢/kWh) to Grand Crossing wholesale distribution costs as shown in Figure 2, which graphs wholesale distribution unit costs (\$ per MWh) versus historical and forecasted electric load. Note that load growth from the Industry Business Center is expected to reduce wholesale distribution costs to pre-2014 12 kV WDAT levels.



Timing & Other Issues

- 1) Nullify Warranty Benefit: IPUC's 12 month warranty for the new substation started August 2015. If the substation is mothballed, there will be no load for IPUC to flush out equipment issues during the warranty period. During commissioning, a transformer oil leak was discovered and repaired. Operating the transformer and substation under load during the warranty period could identify other issues.
- 2) Recommissioning Charge: If mothballed for a couple of years, SCE will require new 3rd party test & commissioning report prior to re-energizing the substation. Prior work took 4 days and cost \$98K, which should also be expected for recommissioning.
- 3) WDAT 66 kV Demand Charges: The WDAT is silent on whether demand charges are due if a substation is mothballed, however contract language suggests Demand Charges could apply if the substation is operationally ready to be energized.
- 4) The existing 12 kV WDATs aggregate contract capacity of 9 MW will be exceeded when new load from the Industry Business Center materializes.

Recommendation

Mothballing the substation is projected to reduce wholesale distribution costs by about \$9,415 annually. Including IPUC's response costs for outages over the past 12 months on the less reliable 12-kV interconnection, reduces operating cost savings to \$4,035/yr. The potential of added costs due to nullified warranty benefits, substation recommissioning and 66 kV demand charges, could result in higher costs if the substation is mothballed. The expected reliability improvement is the most compelling argument for energizing the substation. Reliability improvement is critical to attracting higher energy-use customers which would enable IPUC to reduce wholesale distribution costs to pre-2014 levels as SCE's fixed IFA Facilities Charges will be amortized over more MWhs.

We recommend IPUC notify SCE of its intent to decommission the existing 12 kV interconnections and plan to energize the substation when the 12 kV WDATs are terminated. Ideally, the substation would be energized in 4Q15 or 1Q16 to allow substation operations during the warranty period.

Figure 2: IPUC WHOLESALE DISTRIBUTION

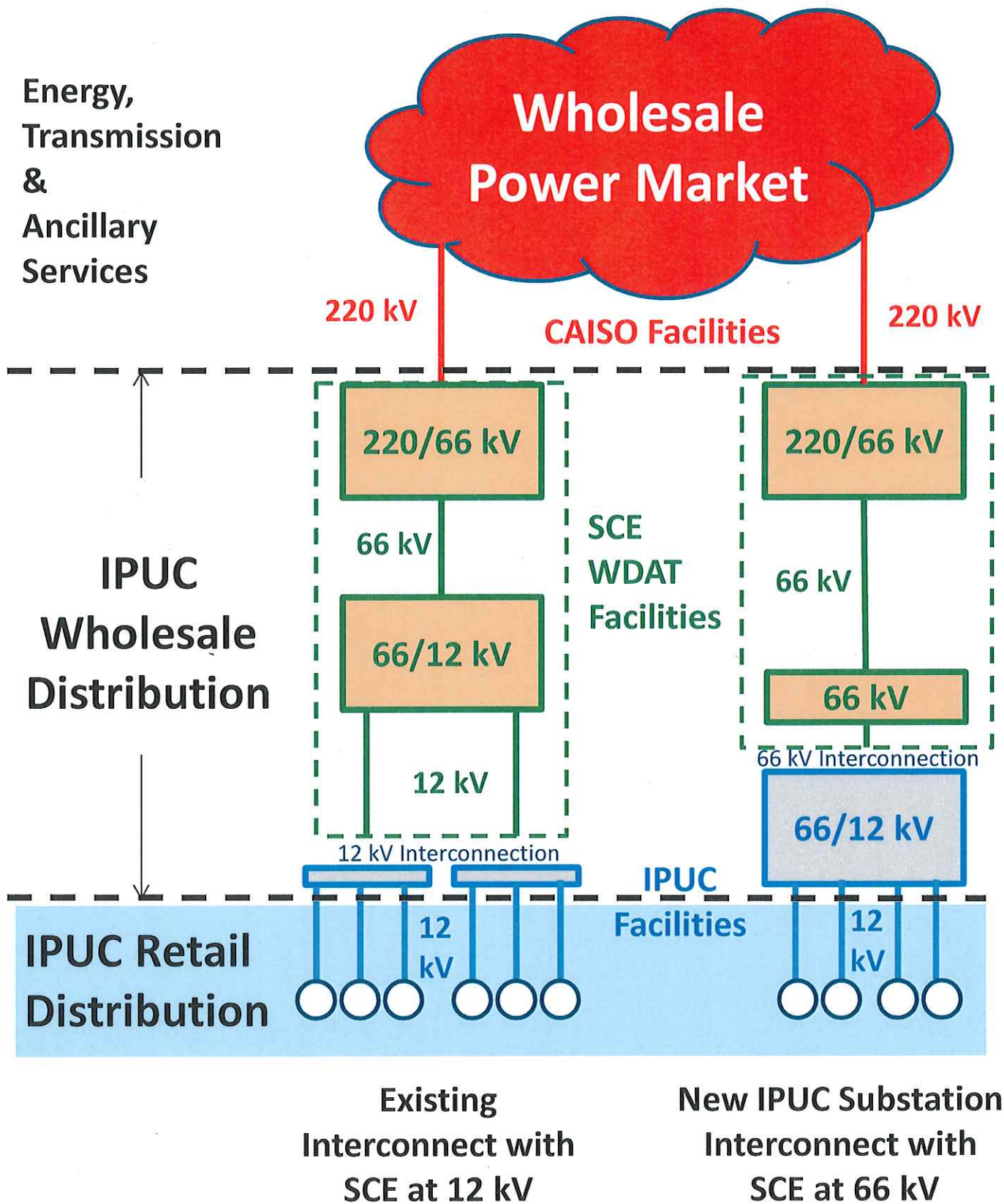


Exhibit 1 - Detailed IPUC Wholesale Distribution Costs

Table 2 - IPUC Historical and Projected Wholesale Distribution Operating Costs

	Historical		Current		Future	
	2013	2014	2015	2016	2017	2018
Selected IPUC Operating Data						
Peak Demand, kW	6,115	6,267	6,390	6,516	7,000	9,000
Energy Delivered, MWhs	28,573	32,012	32,916	33,564	36,058	46,360
Load Factor	53%	58%	59%	59%	59%	59%
12 kV Contract Losses, MWhs	1,452	1,621	1,666	1,699	1,732	2,607
66 kV Contract Losses, MWhs		659	678	691	743	955
Wholesale Energy Cost, \$/MWh	\$51.76	\$55.96	\$56.00	\$56.00	\$56.00	\$56.00
Wholesale Distribution Cost Detail						
<u>Existing 12 kV Inteconnection</u>						
SCE Wholesale Charges						
WDAT Contract Losses	\$75,160	\$90,731	\$93,280	\$95,117	\$96,989	\$145,978
Demand Charges	\$111,486	\$111,486	\$111,486	\$111,486	\$111,486	\$115,146
SCE IFA Facilities Charges						
Distribution Upgrade			\$90,932	\$90,932	\$90,932	\$90,932
Interconnection	\$4,616	\$4,616	\$120,914	\$120,914	\$120,914	\$120,914
Subtotal SCE Wholesale Charges	\$116,102	\$116,102	\$323,332	\$323,332	\$323,332	\$326,992
O&M 12 kV Facilities	\$16,000	\$0	26,667	\$48,000	\$16,000	\$16,000
TOTAL ANNUAL COST	\$207,262	\$206,833	\$443,279	\$466,449	\$436,322	\$488,971
<i>per MWH</i>	\$ 7.25	\$ 6.46	\$ 13.47	\$ 13.90	\$ 12.10	\$ 10.55
<u>Waddingham 66 kV Substation</u>						
SCE Wholesale Charges						
WDAT Contract Losses		\$36,902	\$37,972	\$38,719	\$41,597	\$53,481
Demand Charges		\$99,201	\$99,201	\$99,201	\$99,201	\$127,521
SCE IFA Facilities Charges						
Distribution Upgrade		\$90,932	\$90,932	\$90,932	\$90,932	\$90,932
Interconnection		\$131,040	\$131,040	\$131,040	\$131,040	\$131,040
Subtotal SCE Charges		\$321,173	\$321,173	\$321,173	\$321,173	\$349,493
O&M Substation		\$65,000	\$84,333	\$65,000	\$62,000	\$126,000
Substation Energy Losses			\$9,216	\$9,398	\$10,096	\$15,577
TOTAL ANNUAL COST		\$423,075	\$452,694	\$424,892	\$424,770	\$528,974
<i>per MWH</i>		\$ 13.22	\$ 13.75	\$ 12.66	\$ 11.78	\$ 11.41
<u>66 kV vs 12 kV WD Cost Comparison</u>						
Annual			\$ 9,415	\$ (41,557)	\$ (11,552)	\$ 40,003
Cummulative			\$ 9,415	\$ (32,142)	\$ (43,694)	\$ (3,690)

Exhibit 2: Detailed Substation Operations and Maintenance Costs by Vendor

TABLE 3: ANNUAL WADDINGHAM SUBSTATION O&M COST ESTIMATE FROM VENDOR PROPOSALS

O&M TASK BY VENDOR	Proposal Budget	Estimated Costs			Comments
		Year #1	Year #2	Year #3	
Butsko Utility Operations Support					
Emergency & Planned Outage Support	\$ 12,000	\$ -	\$ -	\$ -	
Substation Maintenance Support	\$ 22,000	\$ 16,000	\$ 16,000	\$ 16,000	4 hrs per month (\$9,600). 4 Days for annual inspections (\$6,400).
Substation Monitoring	\$ 15,000	\$ 12,000	\$ 12,000	\$ 12,000	Includes SEL HMI status checks, alert monitoring, BUDI IT PC setup , remote access setup, and SEL software updates.
Preparation & Maintenance of Circuit Operating Maps	\$ 6,000	\$ 3,000	\$ -	\$ -	
Meetings	\$ 5,000	\$ -	\$ -	\$ -	Meetings with city staff and others.
Subtotal Butsko O&M	\$ 60,000	\$ 31,000	\$ 28,000	\$ 28,000	
IEM Maintenance Support					
Annual Maintenance and Inspections	\$ 26,100	\$ 22,000	\$ 22,000	\$ -	Utility and ANSI Standard Annual Maintenance Recommendation
3rd Year Maintenance and Inspections	\$ -	\$ -	\$ -	\$ 74,000	Utility and ANSI Standard Third Year Maintenance Recommendation
Subtotal IEM O&M	\$ 26,100	\$ 22,000	\$ 22,000	\$ 74,000	
ILB					
Substation Maintenance Support	\$ 12,000	\$ 12,000	\$ 12,000	\$ 24,000	High Voltage Crew Support: Grounding 66KV & 12KV circuits, insulator and pothead cleaning & inspections.
Subtotal ILB O&M	\$ 12,000	\$ 12,000	\$ 12,000	\$ 24,000	
TOTAL ESTIMATED SUBSTATION O&M		\$ 65,000	\$ 62,000	\$ 126,000	
AVERAGE 3-YR SUBSTATION O&M		\$84,333			

Exhibit 3: 12 kV Switchgear Operations and Maintenance

TABLE 4: ANNUAL 12 KV SWITCHGEAR O&M COST ESTIMATE
Quote provided by vendor: Sneodin Electric

O&M Task	2015 ¹	2016	2017	2018
Libby Switchgear				
3 rd party testing on (2)15KV breakers				
Testing of (2) 551 SEL relays				
PM switchgear				
Temp generator for testing equipment				
SCE switching fees				
Waddingham Way Switchgear				
3 rd party testing on (5)15KV breakers				
Testing of (5) SEL 351-7 relays				
PM switchgear				
Remove and Replace 48V control batteries				
SCE switching fees				
Total 12 kV Switchgear O&M	\$48,000	\$16,000	\$16,000	\$16,000

¹ 2015 O&M includes deferred maintenance for 2013 & 2014