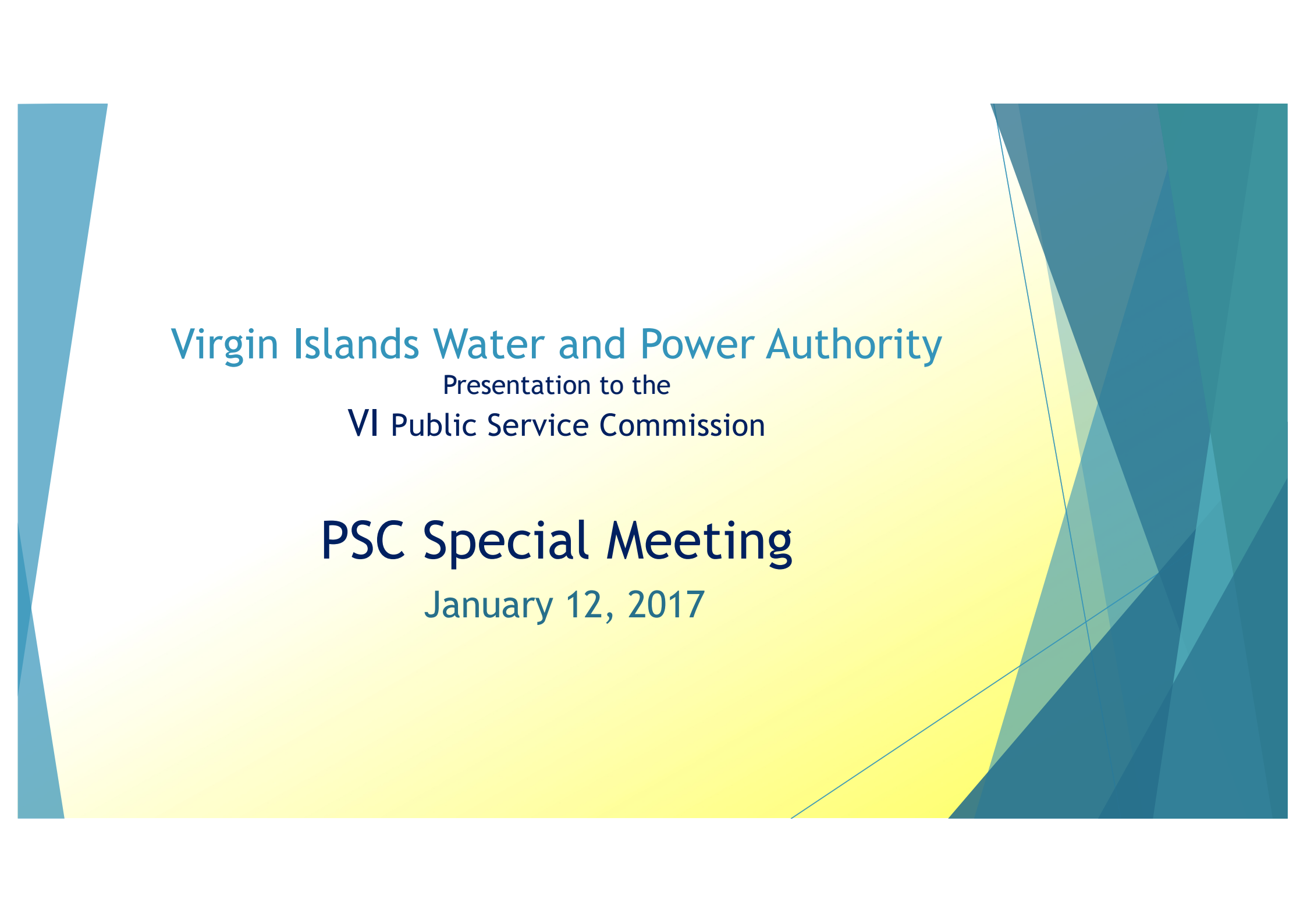


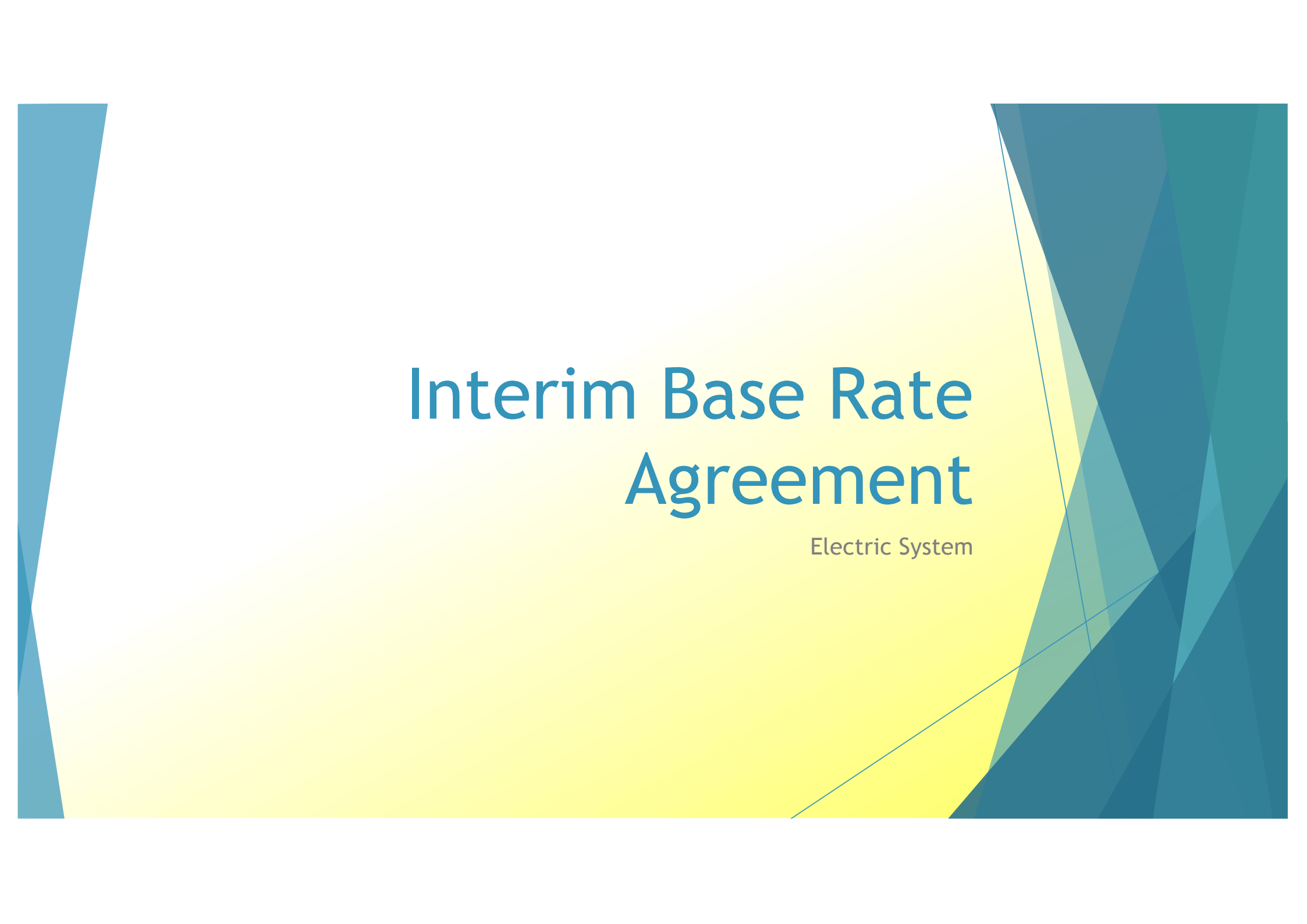


Virgin Islands Water and Power Authority

Presentation to the
VI Public Service Commission

PSC Special Meeting

January 12, 2017

The background features a large, abstract geometric design. On the left, a solid blue vertical bar is partially visible. The central area is a bright yellow trapezoid. On the right, there is a complex arrangement of overlapping triangles in various shades of blue and teal, creating a dynamic, layered effect.

Interim Base Rate Agreement

Electric System

Interim Base Rate Agreement

- ▶ Developed in collaboration with PSC consultants, staff and legal counsel
- ▶ Request approval of proposed interim increase based on \$14.5 million annual base rate increase
- ▶ Proposed rates target 1.5X Debt Service Coverage on an annualized basis
- ▶ Proposed rates include temporary suspension of OPEB surcharge
- ▶ Proposed base rates reflect no bill impact for residential customers using 250 kwh or less per month
- ▶ Proposed base rates were also adjusted to include LPG infrastructure fee and LPG operations and maintenance fee that were removed from LEAC charge as directed by the PSC

Interim Base Rate Agreement

- ▶ Proposed Base Rate Increases are needed to:
 - ▶ Stabilize WAPA's financial position
 - ▶ Provide funding for operating and capital investment needs including new generation
 - ▶ Avoid technical default on Bond Covenants
 - ▶ Junior Lien Debt
 - ▶ Allow time for further examination of WAPA's base rate requirements (target date of 6/17 for completion of rate case)

Interim Rate Proposal: Rate Impact

Interim Rate Proposal - Compressed Bill Impact

Effective Date February 1, 2017

	kWh	Current Bill	Proposed Bill	Change \$	% Increase
Residential	250	\$ 78.04	\$ 85.71	\$ 7.67	9.8%
Residential	400	\$ 121.95	\$ 138.16	\$ 16.21	13.3%
Commercial	1,200	\$ 393.88	\$ 472.52	\$ 78.64	20.0%
Large Power (75% load factor)	20,000	\$ 5,827.00	\$ 6,942.98	\$ 1,115.98	19.2%

**Proposed rate includes proposed LEAC factor of \$.143603/kWh*

Interim Rate Proposal: Rate Impact (cont'd)

Interim Rate Proposal - Compressed

Bill Comparison

Effective Date February 1, 2017

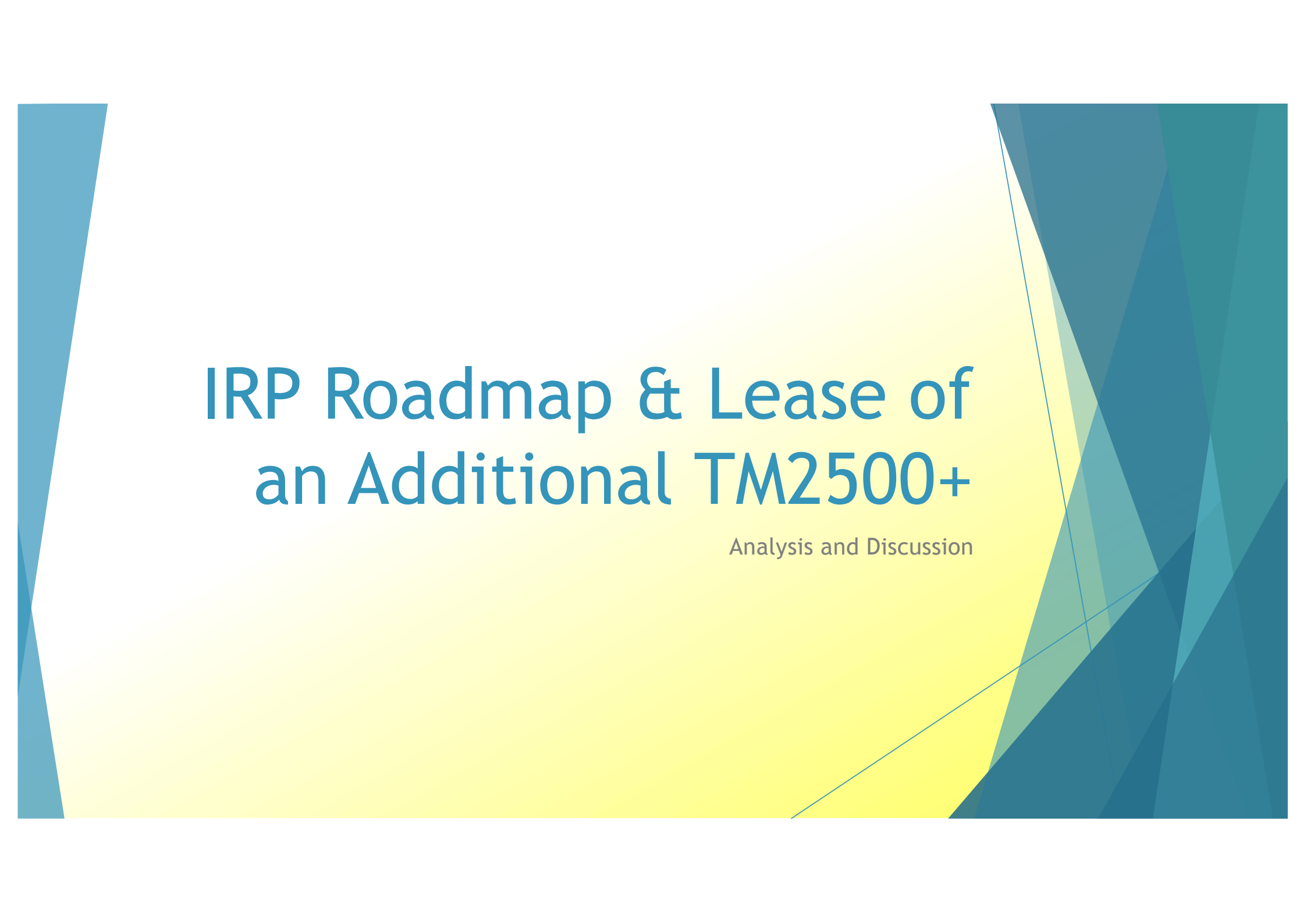
	kWh	6/30/15 Bill	Current Bill	Proposed Bill	Change \$	% Increase
Residential	250	\$ 102.84	\$ 78.04	\$ 85.71	\$ (17.13)	-16.7%
Residential	400	\$ 161.63	\$ 121.95	\$ 138.16	\$ (23.47)	-14.5%
Commercial	1,200	\$ 512.92	\$ 393.88	\$ 472.52	\$ (40.40)	-7.9%
Large Power (75% load factor)	20,000	\$ 7,811.02	\$ 5,827.00	\$ 6,942.98	\$ (868.04)	-11.1%

**Proposed rate includes proposed LEAC factor of \$.143603/kWh*

**Change and % increase compares 6/30 Bill to Proposed Bill*

Interim Base Rate Agreement

- ▶ Completed Integrated Resource Plan to support future power supply strategy
- ▶ Developed Near Term Generation Plan to increase reliability and efficiency of generation fleet with initial emphasis on St. Thomas
 - ▶ Plan reflects the short term lease of two (2) generating units (extension of Unit 25 lease and new lease for Unit 26)
 - ▶ Plan reflects the lease/purchase of three (3) 7MW Wartsilla generating units in the initial year with another three (3) 7MW RICE Units in the following year

The background features abstract geometric shapes in various shades of blue and yellow. On the left, a vertical blue bar is partially visible. The right side is dominated by a large, complex shape composed of overlapping triangles and polygons in different blue tones. A bright yellow area is located in the center-right, behind the main text.

IRP Roadmap & Lease of an Additional TM2500+

Analysis and Discussion

First: A Look at WAPA's Current Generation Fleet (CY 2016)

Generator	Type	Avg. Gen (MW)	Fuel Type	Avg. Heat Rate (BTU/kWh)	Operational
Unit 11	ST	0.0	--	--	No
Unit 13	ST	0.0	--	--	No
Unit 14	CT	9.3	Oil	17,857	Yes
Unit 15	CT	15.0	Oil/LPG	16,428	Yes
Unit 18	CT	13.5	Oil/LPG	17,447	Yes
Unit 23	CT	25.3	Oil	14,445	Yes
Unit 25 (Lease)	CT	15.0	Oil	11,572	Yes

Average Total Plant Heat Rate: 14,450 BTU/kWh

The background features a large, soft yellow oval in the center. To the left is a solid blue vertical bar. To the right is a complex arrangement of overlapping blue triangles and polygons in various shades, creating a dynamic geometric pattern.

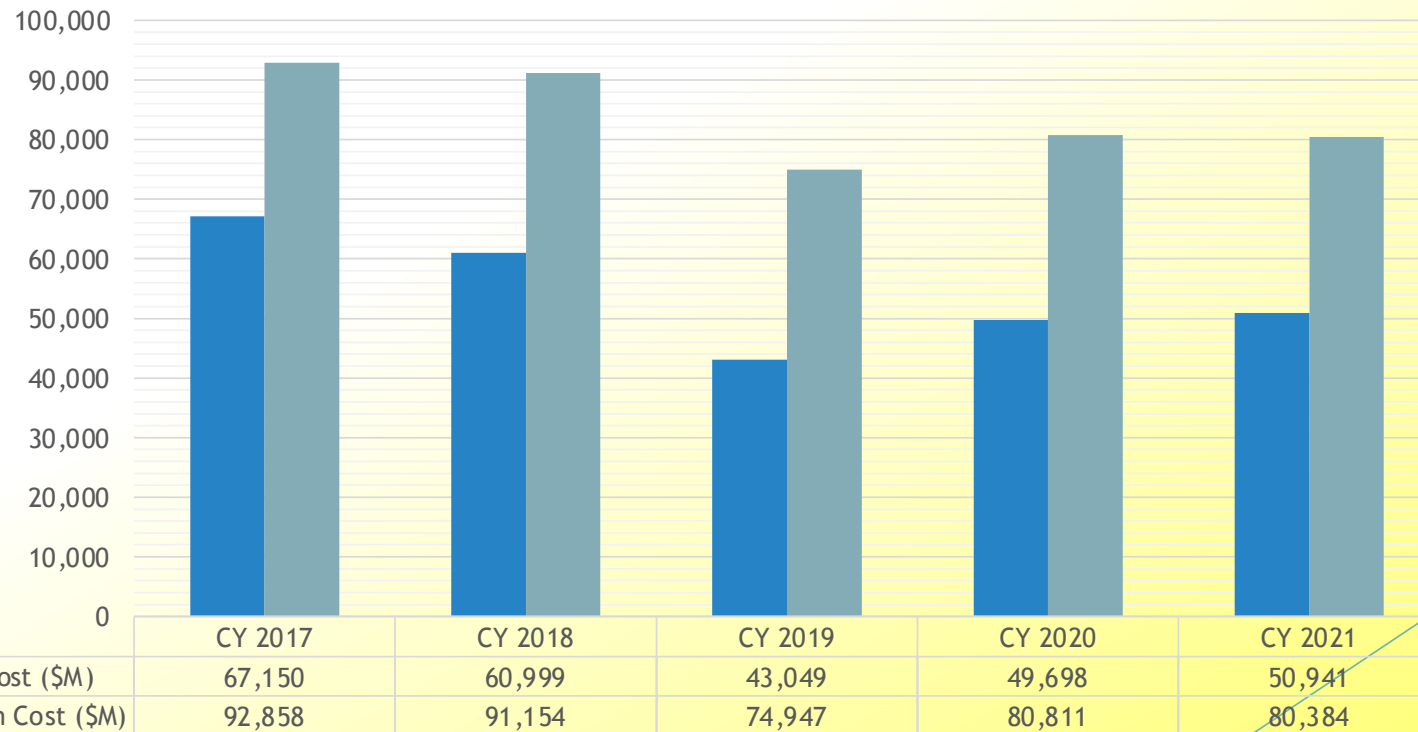
IRP - Case 4TW

Base Case Analysis

Case 4TW: Timeline of Major Facility Changes Through CY2020

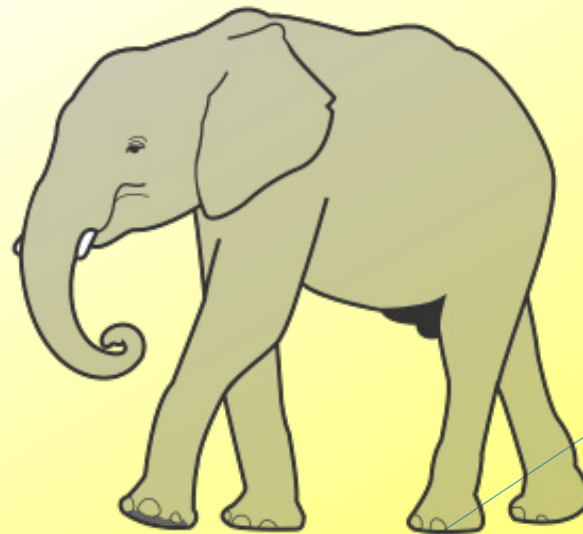
Unit	Terms	Start Date	End Date
Unit 25	1-Year Lease	December 2016	November 2017
Unit 14	Retire	March 2017	-
Unit 26	2-year Lease	April 2017	March 2019
Unit 23	Overhaul/Conversion	April 2017	September 2017
(3) Wartsila	Lease/Purchase	December 2017	-
Unit 15	Retire	November 2018	-
(7) RICE	Purchase	December 2018	-
Unit 23	Retire	March 2019	-
Unit 18	Retire	December 2019	-
(3) RICE	Purchase	December 2019	-

Case 4TW: Year-over-Year Cost Comparison Through CY2021



“ Wouldn't it be more cost effective to forego the overhaul of Unit 23 and install an additional leased TM2500+ in its place? ”

THE ELEPHANT IN
THE ROOM



The background features abstract geometric shapes in various shades of blue and yellow. On the left, a vertical blue shape is partially visible. The center is dominated by a large, bright yellow shape. On the right, there is a complex arrangement of overlapping blue and teal geometric shapes, including triangles and polygons, creating a dynamic, layered effect.

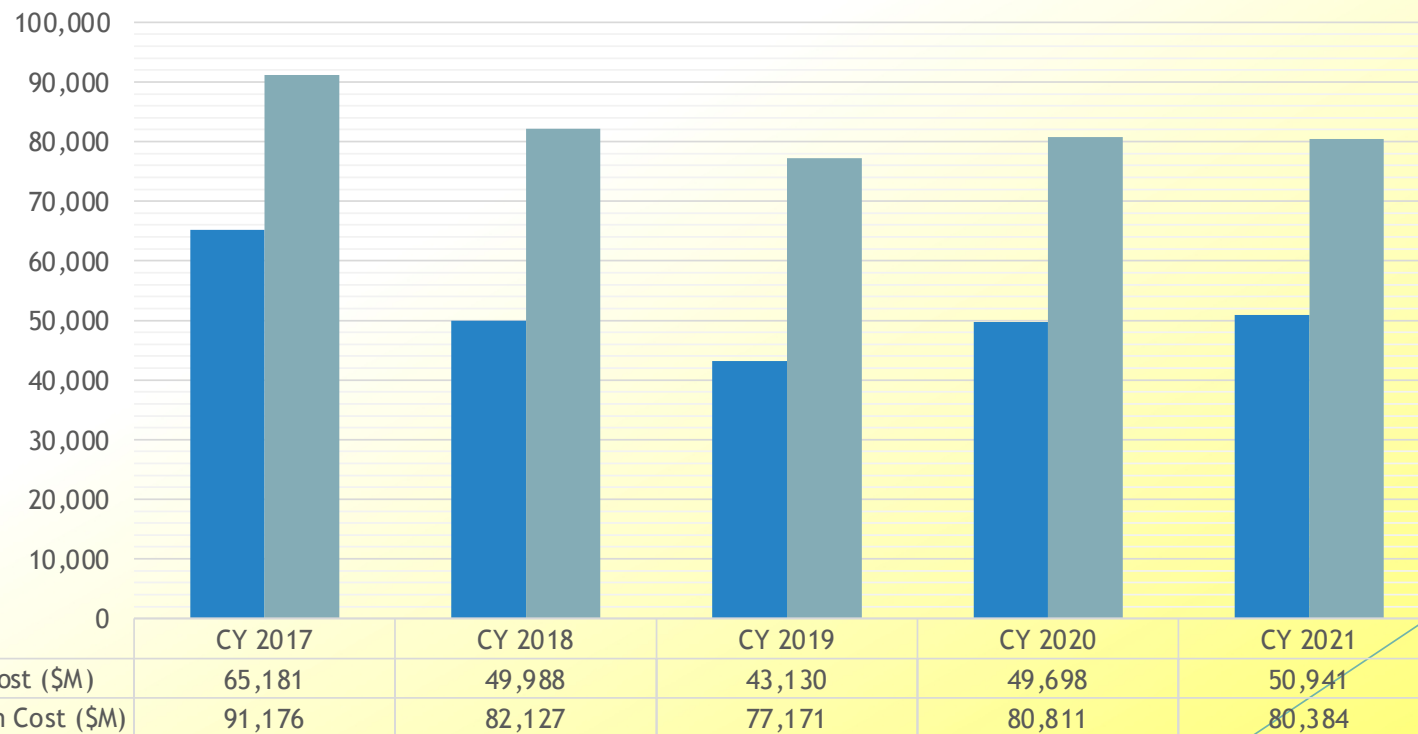
IRP - Case 7TW

Alternate Case 1 Analysis

Case 7TW: Timeline of Major Facility Changes Through CY2020

Unit	Terms	Start Date	End Date
Unit 25	1-Year Lease	December 2016	November 2017
Unit 14	Retire	March 2017	-
Unit 26	2-year Lease	April 2017	March 2019
Unit 23	Retire	July 2017	-
Unit 27	2-year Lease	August 2017	July 2018
Unit 14	Retire	March 2017	-
(3) Wartsila	Lease/Purchase	December 2017	-
Unit 15	Retire	October 2018	-
(7) RICE	Purchase	December 2018	-
Unit 18	Retire	December 2019	-
(3) RICE	Purchase	December 2019	-

Case 7TW: Year-over-Year Cost Comparison Through CY2021



VI WAPA's Concerns with Case 7TW

► Logistics:

- Placement of the additional TM2500+
 - The footprint of the Harley Plant would require the Authority to place the additional TM2500+ in the location where U23 currently occupies.
 - Does the current condition of the existing ancillary components for U23 provide a suitable environment for the replacement TM2500+ to operate? (A coordination similar to U22 and the incoming TM2500+)
- Cost and time constraints for installation of the additional unit
 - Estimated demolition, construction, and installation costs are unknown
 - Project presents a high potential for new or additional permitting
- Potential square-footage acquired for the installation of new generation by demolishing of U23 first versus that of U15, U18, and HRSG21

VI WAPA's Concerns (cont'd)

► Reliability:

- Utilizing U23 as the designated Emergency Unit versus the less efficient and less reliable Units 15 and 18.

Generator	Avg. Gen (MW)	Avg. Heat Rate (BTU/kWh)	Operating Hours	Forced Outage Duration (hrs.)	Unit Availability Percentage	Last Overhaul
Unit 15	15.0	16,428	4,270	1,176	86.6%	2012
Unit 18	13.5	17,447	3,569	795	90.9%	2014
Unit 23	25.3	14,445	8,183	360	95.9%	2010

Unit performance data based on information collected for CY 2016

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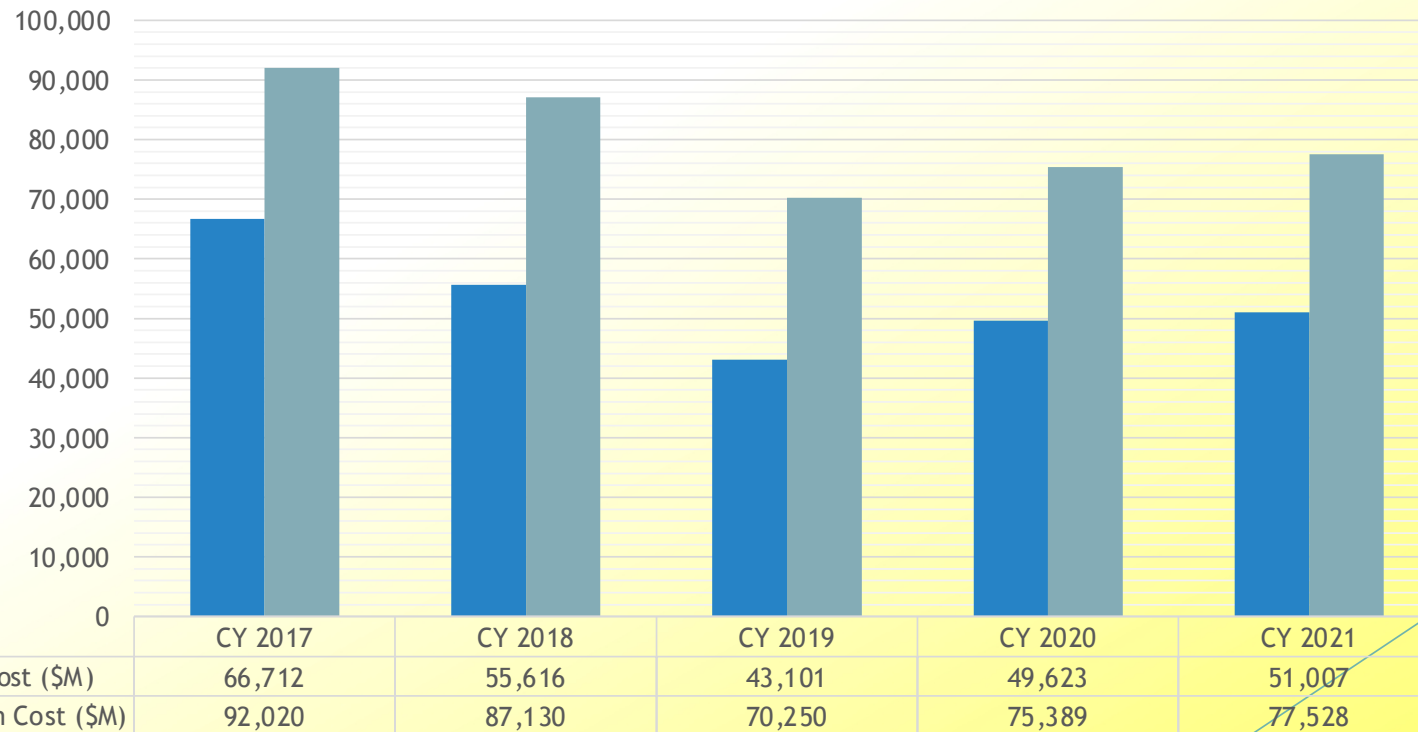
IRP - Case 5TW

Alternative Case 2 Analysis

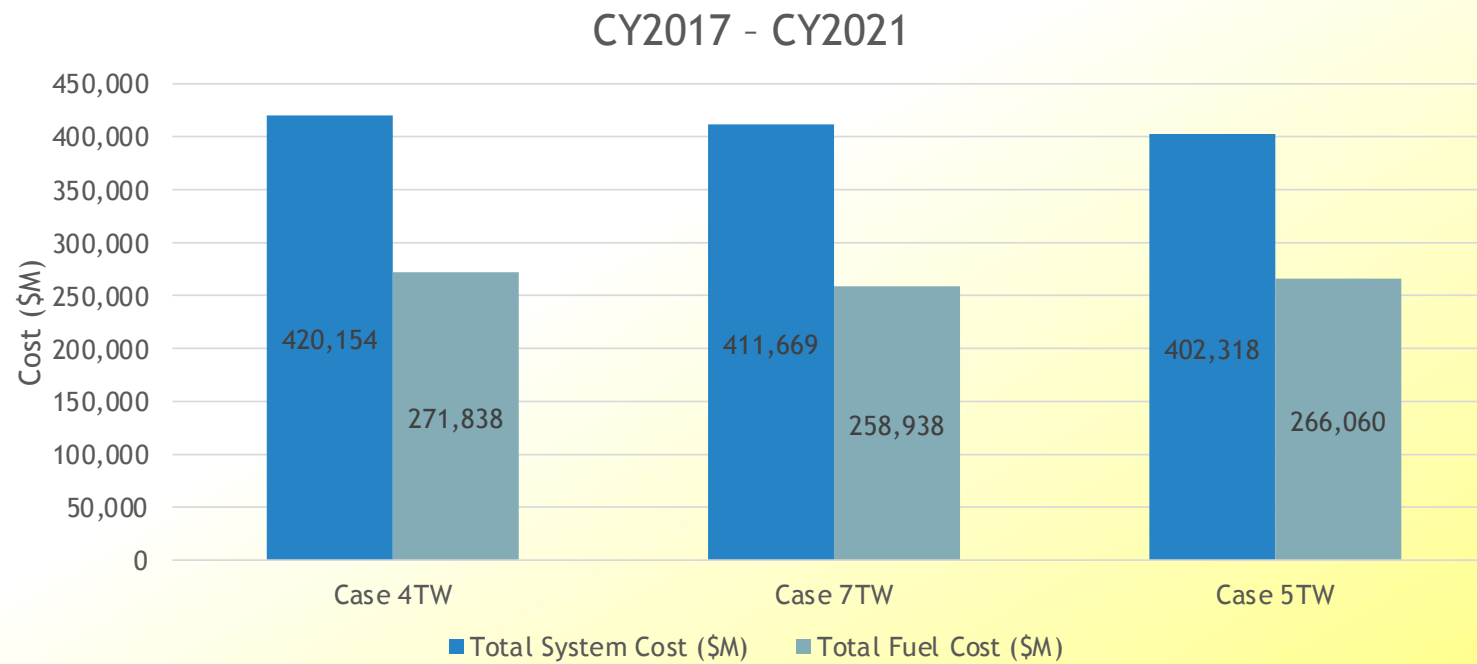
Case 5TW: Timeline of Major Facility Changes Through CY2020

Unit	Terms	Start Date	End Date
Unit 25	1-Year Lease	December 2016	November 2017
Unit 14	Retire	March 2017	-
Unit 26	2-Year Lease	April 2017	March 2019
Unit 23	Overhaul/Conversion	April 2017	September 2017
Unit 15	Retire	November 2017	-
Unit 18	Retire	December 2017	-
(3) Wartsila	Lease/Purchase	December 2017	-
Unit 27	1-year Lease	February 2018	January 2019
(7) RICE	Purchase	December 2018	-
Unit 23	Retire	December 2019	-
(3) RICE	Purchase	December 2019	-

Case 5TW: Year-over-Year Cost Comparison Through CY2021



Case 5-Year Total Cost Comparison



Savings of \$ 9,351 in Total System Cost from Case 5TW vs. Case 7TW

WAPA's Proposed Solution: Case 5TW

- ▶ Case Benefits:
 - ▶ Substantial cost savings when compared to Case 4TW and Case 7TW
 - ▶ All of WAPA's least efficient generators will be retired sooner
 - ▶ Ease of installation of additional TM2500+ in place of Unit 18 vs Unit 23
 - ▶ Case 5TW ensures that we maintain the highest level of plant reliability through CY2021
 - ▶ Provides potential for additional savings if we bring the additional TM2500+ online sooner

Summary: STT Case Options CPWC

