November, 2012





- Oakley already approved once by Commission
- · Meets two conditions for resubmittal and approval
- Accelerating renewable integration driving flexibility needs
- Oakley reduces reliability risks and should be approved now

Oakley approved once already

- Winning bid from 2008
- Application for approval of Oakley filed September 2009
 - D.10-07-045 found Oakley not needed at that time
 - Petition to modify led to D.10-12-050
- D.10-12-050 approved Oakley, finding (FOF 3-6):
 - Oakley is highly efficient (it has a very low heat rate) and will enable
 California to meet increasingly stringent GHGeduction goals.
 - Oakley would allow for the retirement of peaking resources with high heat rates.
 - Oakley would allow for renewable integration by providing load following capabilities. The combination of this generation attribute with a low hear rate is uncommoin the current generation fleet.
- · Court of appeals annulled D.10-12-050 ponocedural grounds
 - Procedural issues have been resolved
 - Project's benefits still valid today



Conditions for Re-submittal and approval met

D.10-07-045

Thoughwe deny the Oakley Project at this time, we understand that developing and building a power plant in California is a long proces fraught with pitfalls. Given this risk and the fact that we believe plant has numerousbeneficial attributes.

Prior to the next PG<RF@he conditions under which PG&E may resubmit the Oakley Project:

- Demonstrate that the Oakley Project has received the necessary permits CECpermits are final and nonappealable
- 2. If the final results from the CAISORenewableIntegration Study demonstrates that, even with the projects approved by the Commission, there are significant negative reliability risks fro integrating a 33%RenewablePortfolio Standard." (D.10-07-045, p.40-41) CAISOstudies filed at FERC



Oakley is viable and beneficial

Favorable compared to other flexible generation alternatives

Timing and viability:

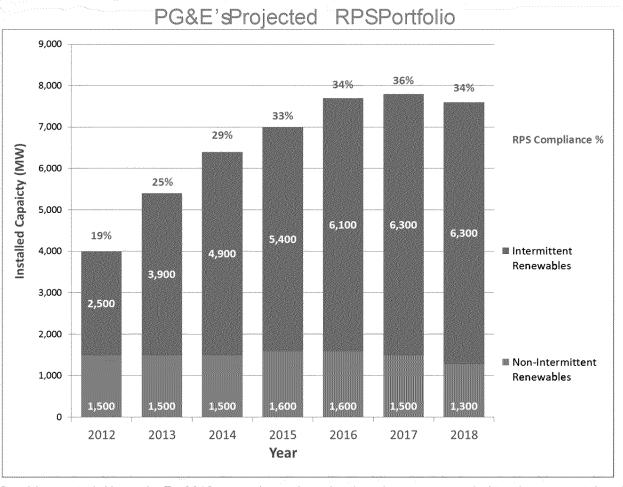
- Oakley is fully permitted and under construction
 - · Construction started on site
 - Signed interconnection agreement. Construction needs to start on network upgrades to keep current schedule
 - Millions already invested in project
- CECand BAAQMoermits are final and non-appealable

Oakley environmental footprint and technology are superior to existing alternatives:

- Lower GH@missions
 - Lower heat rate and lower minimumload
- Located on an existing industrial site
- Uses less water than other conventional resources
- Will have a beneficial impact of reducing electricity market prices
- Faster starts and faster ramping
- Permits do not constrain plant operations

Increasing Challenge to Integrate Significant Amounts of Intermittent RenewableCapacity

Significant renewable capacity coming on line - faster than expected



Note:

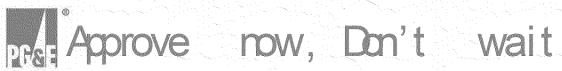
Graphic created November7, 2012; capacity values in the chart are rounded to the nearest hundreds place. Assumes 100%contract success rate.

CAISOStudies - Significant Reliability Risk

Even with Oakley, challenge remains to meet flexibility need

- CAISO's Calpine Sutter waiver study shows need exists, assuming Oakley is approved (comments on Draft Resolution E-4471)
- Commissiondoes not need to adopt CAISO'sspecific finding of 3,750 MWof flexible capacity needs in 2018 to conclude evidence of significant reliability risk.
- Existing Once Through Cooling retirements statewide expected:
 - 8,100 MW etired by 2018
 - 12,100 MW etired by 2020
- Oakley is a viable hedge against risks of significant 2017-2018 flexibility need.

7



- Consideration of Oakley now is appropriate pursuant to D.10-07-045
- Waiting for resolution of 2012 LTPPwill not meet flexibility needs in the 2017-2018 timeframe.
- Oakley is more cost effective than other alternatives to meet 2017-2018 needs.
 - More viable and cost effective than any new generation alternatives.
 - Preferable to delaying retirement of older, less efficient OTC units.

1 - 2 -	<u> </u>	1.00	5, 5, 1	`		2.186.1		- : - :				-					1.00		1.15.1				10.50	3,000			<u>- 1</u>	
			1981			enterior Messal	****		D	elc	pnen	t Tineli	ne fo	rnew	resou	rœ(s)			1.	and the second	- 1% 							
100	2013				2014	2015						016	1			2017			2018				2019					
Q	D	d 3 (d # (đ	Œ	C3	Q4	QI.	02	C 3	Q 4	di c	2 02	Q4	d	O2	СЗ	Q4 .	ДI	Φ2	OB () Q	(22	СЗ	Q4		17.	1
1 20)12 LT	P Pro	ceedi	ma Ta		Wallest Andrews			7		-								duction of the		7.5							
					1, , ,	Pre		VIII-533,623,633		discussion.					***************************************	um symmetric med	***************************************											Interdocusion
Laurence						- 1, 1 - 1, 1 + 1	N.C.		Rn L Olic								m ecatacumacays				A constraint of the constraint							***************************************
- - - - -												Œ	C Re	view A	of	***************************************	in in its and its and									Connerna Becau	ermontes of the	- consistence
EXECUTABLES.	alexanse is a res	er (moneum en		222410[jus.	octorio de la compania del compania del compania de la compania del compania de la compania de la compania del compania de la compania de la compania de la compania de la compania del compania del compania del compania del compania del la compania del		CALIS	n G	nterco	mec	tian	Process				oonasonsen					AND THE PROPERTY OF THE PROPER	signettasserner 		anna ann an a		incontraction of the contraction	hommonomal	Distriction
						Site pro viram e nt studi	al				XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	OCOPANIA DE LA CARRA DEL CARRA DE LA CARRA DE LA CARRA DEL CARRA DE LA CARRA D										The state of the s	e de contro di della				Developed teachings.	e de minima de manación
								1	Fi			d comple itting p						e de la companya de l			::::::::::::::::::::::::::::::::::::::				- Commission		enapase es	200000000000000000000000000000000000000
				- Material					WHEN CONTRACTOR AND A STATE OF THE STATE OF							PS apper financ	ıl/					Common the common commo			SPH III James and American State of the Stat			nacement discussion in
4600 to the control	Miller Control of Miller School		en e	vinien (Silos Billion 				Augusta de Company			no Proces			obelikeliki projek							Q	nstru	ction					Directoration (State)

8