

BOEM's Offshore Renewable Energy Program

> Maureen A. Bornholdt Program Manager

Office of Renewable Energy Programs Bureau of Ocean Energy Management



Bureau of Ocean Energy Management

Oversees development of the nation's oil and gas, renewable energy, and other mineral and energy resources on the Outer Continental Shelf



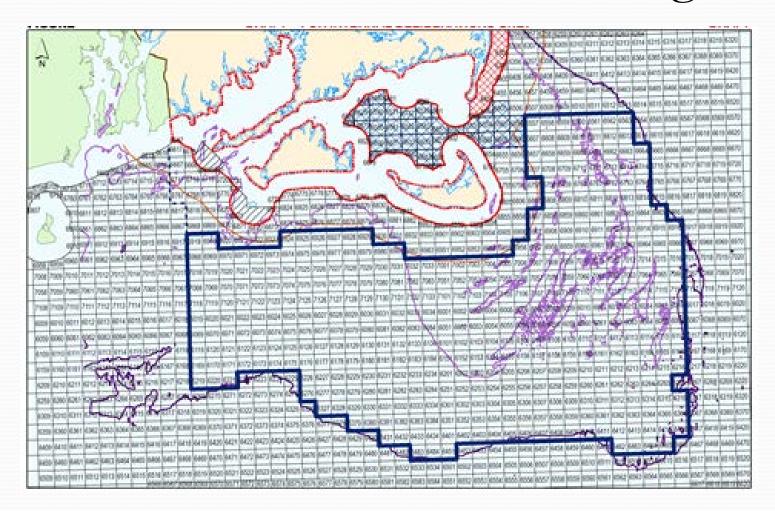
BOEM's Staged Offshore Wind Authorization Process

Planning and Analysis
 Leasing
 Site Assessment
 Construction and Operations

Massachusetts Planning & Analysis

- Massachusetts Intergovernmental Renewable Energy Task Force (November 2009)
- Request for Interest (December 2010; March 2011)
- Reduction of eastern portion of RFI area (May 2011)
- **Call for Information and Nominations** & Notice of Intent to Prepare Environmental Assessment (February 2012)
- Area Identification of the Massachusetts Wind Energy Area (May 2012)
- Notice of Availability of an **Environmental Assessment** (November 2012)
- Department of Energy National Renewable Energy Laboratory Final Delineation Report of the Massachusetts WEA (December 2013)

Massachusetts – Initial Planning Area



Massachusetts – Revised Area

1	1				2	3	5	Z.	7	7				3	×	1	1	Y	3			1		-	15	56	1	[-	2		6306	6307	6308 6358	T				353 63 363 63	-	15 63 65 63	16 634 66 636	7 634	8 6369
T	1				Sec.	,7	05	19	5	(2		15	1	-			2			Y	(JE	1	1.1 m	V	-			- 1	ß	I	6406	6407	6408	409	5410	6411 8	412 6	413 64	-	_	-	-	8 6419
					5	0	1		Ş.	1	6	1	2		00			1		11	m Y	Ζ.	104	1			5		ć		J6455	5 6456	6457	645	6459	6460	6461 0	462 6	463 6		65 64			58 6469
					31	1.	£.	3	3			2	5.5				1	51	-			2 65		30 653	1 653	32 653	a da		T	ÿ	650	5 650	5 6507	600	6509	6510	6511 6	1512	513 6		_	-	-	18 6519
					11	E.	350	-6	20	1	1	5				1	P	-	1	5	4	ċ.	-	80 658	-			1 1800	2 655	655	4 855	5 655	6 6557	6558	6559	6560	2	-	1563 8			-	-	68 6569
				- 6	3.0	100	~ -	-	-)		~	2	20	30	-	1	H.	. 1	1			56. 66	30 66	11 66	32 663	13 660	1	-		14 660	5 660	6 660	6608	6609	6610	5611	5612	6613 6	614 6			-	18 6619
			-	3/	-	. 4	-	-	er f	616 6	617 661	V	X				1			.0	3		1	-	-	642 668	13 65	(9	Y	854 665	6 665	6 665	Asse	6659	6660		_	6663 (-	-	666 66	-	-
	-	-		~		-	a a	654 6	665 66		667 66	X	4		0	1	-				5	9	-	-	. '	17 Magne	~	2	P	1	670	5 670	6 670	670	6709	6710	6711	6712	6713	714 6			-	18 6719
-	(Pr	0708	101	1110	711 67	712 67	13 67	The	715 6	100	0.001	18 6	0/			0	٢.	-		776 81					Ö			N	4	1	Y	55 675	675	7 6758	8759	6760	6761	6762	6763	1764 6		-	-	768 6769
6756	6757	-	-		761 6	0.073		_	-		5767 6	-	_	-V.	2		1	774 6			827 6	08 6	829 6	830		-	-			J	1	505 680	680	7 680	6809	6810	1000	23.27	6813	-			-	818 6819
6806	807	1	5	1010	611 6	812 6	813	814 6	-	-	and a	818 6					873 6	-	-	-	877 6	-	-	880 68	181 64	182 La	-				100	55 68	56 685	7 685	6859	6860	1.00	100	6863		-	-		868 6869
6856	di i	F	X	-	861 6	862 6		864 6		5866		800		570 68	1 62	12 0	8/3 0		1055 8	1076	027 0	928 6	929 6	630 6	831 0	932 69	133 6	801 60	02 69	33 60	104 89	05 69	06 690	1 10	8 6909	8910			-	-	-	6916 6	_	918 6919
6906	107	0	_	910	5911 0	912 6			1949		6917 6	-			•	172 6	-	-0	-		6077 6	-	100			682 65		951 6	952 69	53 61	154 69	65 69	56 09	695	8 695	0 696	1 0403		6963	-	-	-		1968 10960
6956	22.01.1		6959		8961 6	-	-	-	-	-	6967 6	-+	-	-		-	-			-	1027 7		1020	030	1	032 70	033 7	7 100	002 70	03 7	004 70	105 25	R0 700	7 700	18 700	9 701		-	-		-	7016 7	-+	018 019
7006	7007	7008	7009	7010					-	-	7017 1	-	-	020 7			_	-	_		7077 7	-	_	1060 7	081 7	1082 7	083	101 7	002 P	60 T	154 71	155 70	56 70	57 705	58 705	9 706	7061	7062	7063	7064	7065	7066 7	-	7068 069
7056	7057	7058	7059	7060	7061	7062	7063	-	-	-	7067	7068	2.0	0001-		-	123 1	124	7125	7326	-	128	7129	7130 7	131	1132 7	133	7101 7	102 71	03 7	104 7	105 7	106 71	07 C	hatha	9 711 m NK	19-08	7112	7113	100	-	-	-	7118 123
7106	7107	7108	5188	7138	0.007	7112	100		7115			-	7119	-		122 P	rovio	ence	halfi	9-07 NK16	10	1029	6030	6031 6	1032	6033 6	034	5001 6	1002 6	03 6	1004 6	005 80	os Hyd	irdgr	apher	Gan	YON N	19-	6013	0.5401	1.00	6016	-	6018 015
0002											6018	6019	8020	5021	5022 E	023	024	1025 MATE	60761	6007 i	8028		1	1808	5082	6083 6	5064	6051	0052 6	053 6	1054 6	055 6	056 60	57 60	58 605	59 606	0 6061	6062	6063			-	_	6068 6065
6057	1		1000	6061		-						6069	6070	6071	6072 0	4073	50/4	1475	6+10	4177	6128	6120	6130	6131	6132	6133 6	8134	6101 8	6102 6	103 (6104 6	105 6	106 61	107 61	08 610	09 61	0 6111	6112	6113	6114	6115	6116	6117	6118 6119
6107	1000	1	o posse	6111		11111		_		_	-	-	-	-	-			1			6674	8170	Exes.	6181	6182	6183 6	6184	6151	6152 6	153	6154 6	155 6	156 6	157 61	58 61	59 61	0 6161	1000	1000	1.1.1	1.1	6166	_	01686109
6157	6158	6156	9 6160	6161	6162	6163	6164	6165	6166	6167	6168 6218	5169	6170	6171	6172	91/3	ente	5113	4776	8357	6228	6229	6230	6231	6232	6233	6234	6201	6202 6	203	6204 0	1205 1	206 6	201 104	100 000	09 102	in lose i	1	2 6213	6214	6215	6216	6217	6218
6207															6222	6223	4174	0440	2174	6277	6278	4270	6260	6281	6282	6283	6264	6251	6252 6	253	6254	6255	1256 6	257 6	258 62	50 62	80 626	1 626	2 6263	6264	6265	6266	6267	6268
6257				6261									6270				-	-			6220	6936	6330	6331	6332	6333	6334	6301	6302	1303	6304	6305	5306 6	307 6	308 63	09 63	10 631	1 631	2 6313	6314	6315	6316	6317	6318
6307	630	8 630	9 6310	6311	6312	6313	6314	6315	6316	8317	6318	6319	6320	6321	6322	6323	-		-	6327	6178	6370	6380	6381	6382	6383	6384	6351	6352	\$353	6354	6355	6356 6	357 6	358 63	159 63	60 636	1 636	2 636	6364	6365	6366	6367	6368
6357	635	8 635	636	0 6361	6362	6363	6364	6365	6366	6367	6368	6369	6370	6371	6372	6373	63/4	03/5		-			6430		-		_		6402		5404	6405	6406 6	(427 6	408 64	409 B	10 641	1 641	2 645	0 0614	0413	Delib	1000	6418
640	7 640	8 640	09 641	0 6411	6412	6413	6414	6415	6416	6417	6418	6419	6420	6421	6422	642)	6424	6423	0420	0441				the second second	6487	6483	6484	6451	6452	6453	6454	5455	6456	5457 6	6458 64	459 6	160 64	1 64	52 546	6464	6463	6466	6467	6468
645	7 645	8 643	59 646	0 6461	6462	6463	6464	6465	6466	645	7 6468	6469	6470	6471	6472	6473	6474	9475	06/0	Carl	6524	6530	6535	6531	6532	6533	6534	6501	6502	6503	6504	6505	6506	6507 4	1508 6	509 6	510 65	11 65	2 651	651	6515	6516		6518
650	7 650	18 650	09 651	0 6511	6512	6513	6514	6515	6516	651	7 6468 7 6518	6519	6520	6521	6522	6523	6324	0323	0020	4571	45.70	6579	65,80	6581	6582	6583	6584	6551	6552	6553	6554	6555	6556	6557	6558 6	559 6	560 65	51 65	52 656	3 656	4 656	5 6566	6567	6568
655	7 655	58 65	59 656	656	6562	6563	6564	6563	5 6564	6 656	7 6568	6565	6570	6571	6572	6673	6624	6675	6626	662	6628	6629	6630	6631	6632		-	6601		1.1.1	6604	_	6606	6607	6608 6	1009 E	610 66	11 66	12 561	3 661	4 061	5 6616	6617	6618

Massachusetts – RFI Area

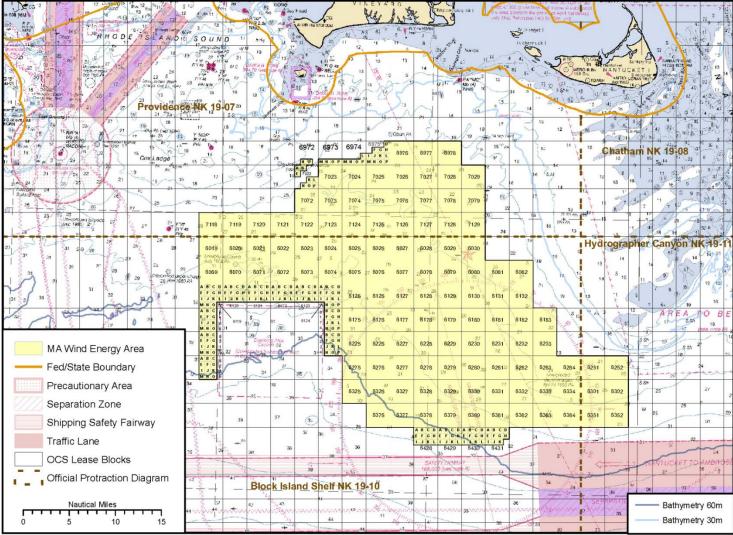
to service and ser	Me sure and	Autore	1 1 1	Chatham NK 19-08	
The second secon		NIN TO STA	- to a la		10 11 12 10 12 12 10 10 10 12 10 10 10 10 10 10 10 10 10 10 10 10 10
The second secon		As me	Namoka Taren 125 - Constitution Salaria Raman (Constitution) Salaria	The state of the s	100 10 10 10 10 10 10 10 10 10 10 10 10
10 12 cheese - 12	Providence	NK 19-07		and a state of the	18861 8862 30 20 20 20 20 20 20 20 20 20 20 20 20 20
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	n to second		and the second	6911 6912 6913 65 m 10 m 10 m 10 m
22 11 12 18 10 10 10 10 10 10 10 10 10 10 10 10 10	6977 6978 6976 6977 6978	to not a to the	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		6997 6962 6963 at 1 at
	7025 7026 7027 7028	7029	12	a a a a a a a a a a a a a a a a a a a	2 7011 7012 7013 7014 2
21 22 23 23 23 7072 7073 70	4 7075 7076 7077 7078	7079		a the second second	7061 7052 7063 7664 7065 21 31 4
7118 7120 7121 7122 7123 713	4 7125 7126 7127 7128	7129	1 10/10		7111 7112 7715 7114 7715 W 14 John 19
	6026 6027 6028 6029	8050 22	11 11 11 11		6011 5012 6013 6014 6015 6016
		6080 6081 6082 6083 6084		8055 9056 6057 6658 6059 60a	
			6101 6102 6103 6104	1 1 1 2 X X I	0 6111 6112 6113 6114 6115 6118 6117 8 m
39 40 40 40 40 40 40 40 40 40 40	1 1 1000	6180 6181 6182 6183 6184		XAT AL	1 6161 6162 6163 6164 6165 6166 6167 @ 31
	a Plane	6230 6231 6232 6233 6234 6280, 6281 6282 6283 6284	- V/X	6205 6206 6207, 6208 6208 6208 6208 6208 6208 6208 6208	A C I A TAND A
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	31 12 12 1	6330-6331 6332 6333 6334	and the second s	IT KATKAL	8511 6312 6313 6314 6355 6316 6317
	6376 6377 6378 6379	6380 6381, 6382 6383 6384			1, 636, 7 6362 6363, 6364 6385 6366 6367 ···
	6428 6429	6430 6431 6432 6433 6434		6405 6406 6407 6408 6400 6410	6411 6412 - 6413 6414 6415 6416 6417 at
19 4 7 9 8 9	SATE A TANKAN SE	6480 6481 6482 6483 6484	6451 6452 6453 6454	A A A AND	6461 6462 8463 6464 6465 6466 6467
12 Nautical Miles from Inhabited Shore	8	6532 6533 6534	6501 6502		6511 6612 6513 6514 6515 6516
21 Nautical Miles from Inhabited Shore		and the for the second second	a or the		6562 6563 6564 4 1
Fed/State Boundary Traffic Separation Scheme			* A	Ajelio XIII (
Nantucket Lightship Habitat Closure Area	a man e			A the part of the part	The second
MA RFI Boundary OCS Lease Blocks	Stration of the second	and the t		SAL ST	
I Official Protraction Diagram	Block Islan	d Shelf NK 19-10		Hydrog	rapher Canyon NK 19-11
Nautical Miles	R		A A		
0 5 10 15 20			State - Ve	An M Lat-	Map ID: PACB-2012-1

Massachusetts – Call Area

	-	20 mm	- and -	-	2	PCA.J	81.05	2-	5 2		July Sty	Datasea	100.00	1. 1999	- 1		N	Ĺ		(m)	12 0	6 1)	a l
The second secon	13 10	PAR 2.5	il ab	AI WIR 168 1/UR 221		5 61	GI E	Y 45 HOHAN	79		aug ers	Muske	iget	10.212			A		X	A1 13	1 72 100		
	UND	17 hay		\searrow	8.	5 6) 91 - 10	B	7 31 8	Sutt	1		Turer	resk 1			A		1	5	1	4 15	01 41	
	22 Y 21	19	13/5	A	11 13	5	1â		100 100	Tide nos	111	25	2	S RTR	ox	Your -	Call Hat	à.	7 8		0 0	NOR!	
Share Changes	au us	DANGER A	ME AL	P DE	G.48	101 1	3 5			min		8. Er	and the second second	(Ong	TR HA	Nantucael			FT 7) 50 1681 31 9 Shuking 1	4H 2	13	1	
E S I I I I I I I I I I I I I I I I I I		A	2 Pl 810	Pit S	10 13	14 N	5		u 317	RV: "MC" Mg (A) WHIS	13	1	71.0	4.	OTCHE	PR POLAN		PC /	11 10001 00	9 11 21 41	Z	18	
	19 20	8	10	324 7 m	THE POINT AN CONTRACT	16	519	10	\$	3	. 15	->	1	1 1 153	41 12	64	20.2	en state at	8. st	8 4 1 1 1	空道	10 10	5
Cast Grownit 7 1	18 80	1- 4	11 13.4	FIR 4s 1' WHIS	17	10	1A	24	16	16	Tures	14	13	-5 -5		12 254 15	8 11	12 pr	1	11 /4 4 /01	21	Z 18	
74 0 AV VA 0 AV VA 0 AV VA 0 AV VA 17 - + 23 10 - 17 17 - + 23 10 - 17 17 - + 23 10 - 17 10	18	- man	-7 200 N	110	18	18	DUTISEN FA	5"	1-10	A -8	17	C	1.3	12	31	9 6 4	Tide Lan	1 41	200	E 22	2.	2 2	2
18 Wins D Charles The Bridge In the	16 18	8 16	P/1	219	5% 21 73 6974, T	6976 D	-74	P1	6978	19	18 ¹⁰ A	1C	514	14 4	12			1 61	3410	41 St.	3. 1	18	
	19 2 Pi	1/		6972 697 4 N O P M N	73 6974. L OPMNOP	IJKL	6976	6977	0978	5	-wZ	ie	S.		6	13	8	15 SE.	14	3.) 9) (2) /1)	2	
21 24 25 21 19 19 13	17 5	8 30		7022 24 7022 70:	23 7024	7025	7026	7027	7028	7029	•)		15 GEM		r. 1	2 13	6	7 15	1 3 22	1	31	Day	
71 21 22 23 31 10	23	6	18	28 3		24	23	23	7078	(20)		2	1 5	-2	13.	1.3	1	42 - 23/	18	9 3	02	2	A
S 20 27 26		25		7072 70	73 7074 S Sh	7075	7076	7077	7078	7079	2)	1 1	13	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11 2	E	7 11		13 23	n 8	8 1° 141	-
Providence NK 19-07	7118 7119	7120	7121	7122 ,71	23 7124	7125	7126	7127	7128	7129	<u>= -</u>	7	8	(* 82 120) ### 1488 PA	T t	" _ C	hat	ham	NK	19-6	18	24 -	1*000"
Desch John Pich H NH 240 40 27		29	<u>20 28</u>		28 76	M 58	27	5	21		24	19		13		drog		010	10	4.4	10	/14 N4	4
a a a a a a a a a a	6019 6029	6021	6022	6023 603	24 6025	6026	6027	6028	6029	6030		22		1	ПУ	ulog	rap	нев	ut ut	yor	NK	19-11	
31 31 229 240 29	6069 6070	6071	6072	6073 60	74 6075	e7 6076	6077	6078	6079	6080	6081	6082	6083	6084	6051	6052		18		10	12	5	
	BCDABC	DABCD	ABCDA	BCDAR	C D	- 24	-40 an	NR.	Aunt	A4	10	22 20	21	1	1	4 1	201	1 0	9	6	15 10	S SH:	
	FGHEFG JKLIJK NOR 6120	E I J Kal	IJKLI	FGHEF JKLIJ 6123 ZNN	G H K L O P	6126	6127	6128	6129	6130	6131	6132	6133	6134	6101	6102	S	7 6		16	18	-	
A man and a A	B C 6 F G 1 6115	-s-		46 8	C D 31	6176	6177	61780	6179	²⁶ 6180	6181	6182	6183	6184	6151	6152	12	2-7	1000	ATC		E 18 A	1
	N 0 9B	30 30	(20) 31	* N2	K L 20 P 21 C D	Stor V	29		1		K	-	29	228		16	8 12	13		1 m m	15 e note k	s	H
	B C 6 F G 2 J K 1 N O 5, 32 (U)	Durgs Caura	o Arps 1/ 32	33 2 F 2 J	G H 6225	6226	6227	6228	6229	6230	6231 28	6232	6233	6234	6201	6202	10	Sh	0	\$ 55 2		10 13	
2 31 A 2 3A	BC6 FG2	S	-34	1	8	6276	6277	5270	6270	²⁸ 6280	6281/4	6202	6202	6284	6251	6252	2	18	18		1	22	
	JKE	34		35	6275	0270	6277 31	6278	6279 29	02302		6282	6283	ozo4 okoneri 2	0251	0252	1 4 1			7-			
and a start of the	35-		3F	35	6325	6326	6327	6328	6329	6330	6331	6332	6333	6334	6301	25 6302		Sh 28	-	2	77		
maganin 12 31 31 31	1 30			-	6 33 6 12 -		33		11 AU	+ 2		27	1.27	5	4	-		6 cn	2	8 ⁶		29	i i
		3	37	34	34 a	6376	6377	36378	6379	6380	638130	6382	6383	6384	6351	6352 20		28	31	3	21		
M R CAR AND ST SS	and the second	~		M 96	50					ABCD EFGH		-	81		10	4	1			32		¥	
1 nm Buffer from TSS		38	32		39 30	37		6426		6430 33	6431	2		51	1. 2 1. 2	3		-	32		33	551	
Call Area	1-1-12	4		39			38	SAFF 186 50	Y FAIRW D'ISRE NO	PAR (33	3	-	1	0			TUREIT	UCKE	T TO AL	MERO	SĚ TR/ 36	1
	-11	12.27	(1		1	14		37	3e	~		/	34	10 84	-		11.			14 5 A S	38		7
TSS	1	1.5					92 <u>-</u> 39	_	\rightarrow		B	36	- at		V SE	38 PARATA	A Z	36	12	2/10	39		30'0"
OCS Blocks	voto voto	43	12.40 17.621000		Constraint Constraint	41	a prove	when	man	35.227	inni	- Norven	(Caller	annan	07	35	ana s	12	-	Bathy	metry	30m	40.
Cfficial Protraction Diagram	21	-		4	4		-13	mal m		1. 1111111	38		39	39	34		1	41	_	Bathy			
L	'1º0'0''W			- And		SAFETY F	4/Rway	70°30'0"V	1		16					V.	70°0'0''	A.		Map ID:	PACB-	2011-106	51

8

Massachusetts – Area ID



Map ID: PACB-2012-1060

Massachusetts Leasing

- Publication of the Massachusetts Proposed Sale Notice in the *Federal Register* on June 18, 2014 for a 60-day public comment period which closes on August 18, 2014
- Simultaneously published Notice of Availability of Revised Environmental Assessment and Finding of No Significant Impacts in the Federal Register
- More information: <u>http://www.boem.gov/</u>
 - → Renewable Energy Programs
 - \rightarrow State Activities
 - → Massachusetts

Thank you!

Maureen A. Bornholdt Maureen.Bornholdt@boem.gov (703) 787-1300

Stage 1: Planning and Analysis

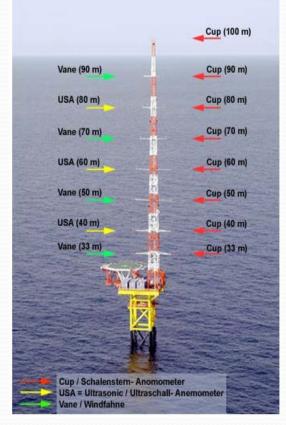
- Establish Intergovernmental Task Force, engage stakeholders
- Publish a Request for Information (RFI)/Call for Information and Nominations (Call)
- Announce Area Identification
- Conduct environmental compliance reviews



- Publish leasing notices
 - Proposed Sale Notice
 - Final Sale Notices
- Issue Lease(s)
 - After environmental reviews are complete
 - Conveys right to submit plans for BOEM's approval
 - Hold lease sale (Competitive)

Stage 3: Site Characterization & Assessment

- Lessee conducts surveys in the lease area (site characterization)
- If lessee intends to install a meteorological tower or buoy, it must submit a Site Assessment Plan (SAP) (site assessment) that BOEM must approve
- Lessee has up to 5 years to conduct these activities



Stage 4: Commercial Development

- Lessee must submit a Construction and Operations Plan (COP) in the first five years of the lease for BOEM's approval
- COP provides details of the proposed project (turbine layout, size, etc.)
- Operations term is typically 25 years

