



# America's New Energy Future:

The Unconventional Oil and Gas Revolution and  
the US Economy

## **Volume 3: A Manufacturing Renaissance**

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*Appendix D. Economic Contribution Assessment –  
Detailed Tables*

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## Appendix D: Economic Contribution Assessment – Detailed Tables

Appendix D contains tables that expand upon the summary tables presented in the body of the report to include a complete set of forecast years – 2012 through 2025 – and each of the components of the full unconventional value chain – upstream energy, midstream and downstream energy, and energy-related chemicals.

Results for the following four concepts are presented:

- 1) Employment Contribution
- 2) Value Added Contribution
- 3) Labor Income Contribution
- 4) Government Revenue

The three contribution concepts (employment, value added, and labor income) are first presented by each of the four Census regions – South, Midwest, Northeast and West – by each of the types of activity – upstream energy activity, midstream and downstream energy activity, and energy-related chemicals activity. Next, for the United States and each of the four Census regions, tables are presented for each of the types of activity – upstream energy activity, midstream and downstream energy activity, and energy-related chemicals activity – by contribution type (direct, indirect, and induced).

For the United States and each of the four Census regions, government revenue is presented for each of the types of activity – upstream energy activity, midstream and downstream energy activity, and energy-related chemicals activity – for each of the forecast years.

As noted, each of the contributions is presented for the United States and each of the four Census regions – South, Midwest, Northeast, and West. The Census regions are defined as follows:

United States Census Regions			
Northeast Census Region	Midwest Census Region	South Census Region	West Census Region
Connecticut	Illinois	Delaware	Arizona
Maine	Indiana	District of Columbia	Colorado
Massachusetts	Michigan	Florida	Idaho
New Hampshire	Ohio	Georgia	Montana
Rhode Island	Wisconsin	Maryland	Nevada
Vermont	Iowa	North Carolina	New Mexico
New Jersey	Kansas	South Carolina	Utah
New York	Minnesota	Virginia	Wyoming
Pennsylvania	Missouri	West Virginia	Alaska
	Nebraska	Alabama	California
	North Dakota	Kentucky	Hawaii
	South Dakota	Mississippi	Oregon
		Tennessee	Washington
		Arkansas	
		Louisiana	
		Oklahoma	
		Texas	

Source: US Bureau of the Census

# Employment Contribution

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<b>US Lower 48 Employment Contribution due to the Unconventional Activity Value Chain: Base Case*</b>														
<b>(Number of workers)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>South Census Region</b>														
Upstream Energy Activity	949,540	1,067,898	1,186,256	1,304,614	1,353,875	1,403,136	1,452,396	1,501,657	1,550,918	1,598,467	1,646,017	1,693,566	1,741,115	1,788,664
Midstream and Downstream Energy Activity	228,485	261,715	231,314	170,142	97,178	105,449	93,640	74,684	60,884	71,628	63,614	64,790	62,663	47,860
Energy-Related Chemicals Activity	51,382	62,773	89,264	134,498	181,527	223,917	225,757	237,230	257,138	260,022	265,672	271,768	292,916	291,123
<b>Total Activity</b>	<b>1,229,407</b>	<b>1,392,385</b>	<b>1,506,835</b>	<b>1,609,254</b>	<b>1,632,580</b>	<b>1,732,502</b>	<b>1,771,793</b>	<b>1,813,571</b>	<b>1,868,940</b>	<b>1,930,117</b>	<b>1,975,303</b>	<b>2,030,124</b>	<b>2,096,694</b>	<b>2,127,647</b>
<b>Midwest Census Region</b>														
Upstream Energy Activity	307,219	366,434	425,649	484,864	510,114	535,363	560,612	585,861	611,110	637,391	663,672	689,953	716,234	742,515
Midstream and Downstream Energy Activity	34,839	45,519	40,413	31,035	13,002	5,369	8,169	8,333	7,208	6,557	5,989	5,429	5,085	4,823
Energy-Related Chemicals Activity	784	1,680	6,966	12,888	21,836	20,246	16,963	10,804	10,813	10,834	10,863	11,908	17,127	18,199
<b>Total Activity</b>	<b>342,842</b>	<b>413,633</b>	<b>473,029</b>	<b>528,787</b>	<b>544,951</b>	<b>560,977</b>	<b>585,744</b>	<b>604,998</b>	<b>629,131</b>	<b>654,782</b>	<b>680,524</b>	<b>707,291</b>	<b>738,446</b>	<b>765,537</b>
<b>Northeast Census Region</b>														
Upstream Energy Activity	195,874	225,334	254,795	284,256	296,848	309,441	322,033	334,625	347,217	362,776	378,334	393,893	409,451	425,010
Midstream and Downstream Energy Activity	47,948	39,325	13,100	4,930	4,034	4,045	3,576	3,154	2,447	1,483	1,364	1,248	1,133	1,018
Energy-Related Chemicals Activity	-	-	-	-	1,321	8,013	9,438	15,142	7,010	7,031	7,048	7,041	7,022	7,027
<b>Total Activity</b>	<b>243,822</b>	<b>264,659</b>	<b>267,896</b>	<b>289,186</b>	<b>302,204</b>	<b>321,499</b>	<b>335,047</b>	<b>352,920</b>	<b>356,674</b>	<b>371,290</b>	<b>386,747</b>	<b>402,182</b>	<b>417,606</b>	<b>433,055</b>
<b>West Census Region</b>														
Upstream Energy Activity	295,972	342,957	389,943	436,928	444,727	452,526	460,325	468,124	475,923	489,236	502,549	515,862	529,176	542,489
Midstream and Downstream Energy Activity	14,261	19,895	17,397	22,726	13,803	8,248	9,281	6,800	2,992	3,949	7,111	8,942	8,911	3,288
Energy-Related Chemicals Activity	1,436	598	490	1,337	5,590	6,515	7,579	2,391	2,395	2,399	2,406	2,403	2,397	2,400
<b>Total Activity</b>	<b>311,669</b>	<b>363,450</b>	<b>407,829</b>	<b>460,990</b>	<b>464,120</b>	<b>467,289</b>	<b>477,184</b>	<b>477,315</b>	<b>481,309</b>	<b>495,584</b>	<b>512,066</b>	<b>527,208</b>	<b>540,484</b>	<b>548,177</b>
<b>United States</b>														
Upstream Energy Activity	1,748,604	2,002,624	2,256,643	2,510,663	2,605,564	2,700,465	2,795,366	2,890,267	2,985,168	3,087,870	3,190,572	3,293,274	3,395,976	3,498,678
Midstream and Downstream Energy Activity	323,648	366,453	302,224	228,832	128,017	123,111	114,665	92,971	73,530	83,617	78,079	80,409	77,792	56,989
Energy-Related Chemicals Activity	53,252	65,051	96,720	148,722	210,274	258,692	259,736	265,567	277,356	280,286	285,989	293,121	319,462	318,748
<b>Total Activity</b>	<b>2,125,504</b>	<b>2,434,128</b>	<b>2,655,588</b>	<b>2,888,218</b>	<b>2,943,855</b>	<b>3,082,268</b>	<b>3,169,767</b>	<b>3,248,805</b>	<b>3,336,055</b>	<b>3,451,773</b>	<b>3,554,639</b>	<b>3,666,805</b>	<b>3,793,229</b>	<b>3,874,415</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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<b>Employment Contribution by Type due to the Unconventional Activity Value Chain: United States*</b>														
<b>(Number of workers)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	360,456	408,936	457,415	505,895	524,800	543,705	562,610	581,515	600,420	625,212	650,004	674,795	699,587	724,379
Indirect	537,663	615,256	692,848	770,441	799,510	828,580	857,649	886,719	915,788	947,461	979,135	1,010,808	1,042,482	1,074,155
Induced	850,485	978,432	1,106,380	1,234,327	1,281,254	1,328,180	1,375,107	1,422,033	1,468,960	1,515,197	1,561,434	1,607,670	1,653,907	1,700,144
<b>Total</b>	<b>1,748,604</b>	<b>2,002,624</b>	<b>2,256,643</b>	<b>2,510,663</b>	<b>2,605,564</b>	<b>2,700,465</b>	<b>2,795,366</b>	<b>2,890,267</b>	<b>2,985,168</b>	<b>3,087,870</b>	<b>3,190,572</b>	<b>3,293,274</b>	<b>3,395,976</b>	<b>3,498,678</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	116,342	131,255	107,971	81,581	45,451	44,011	41,438	33,661	26,386	30,264	28,306	29,247	28,318	20,611
Indirect	86,108	97,796	80,850	61,298	34,472	33,135	30,550	24,688	19,636	22,253	20,763	21,355	20,652	15,161
Induced	121,198	137,402	113,404	85,954	48,094	45,965	42,678	34,621	27,509	31,101	29,010	29,807	28,822	21,216
<b>Total</b>	<b>323,648</b>	<b>366,453</b>	<b>302,224</b>	<b>228,832</b>	<b>128,017</b>	<b>123,111</b>	<b>114,665</b>	<b>92,971</b>	<b>73,530</b>	<b>83,617</b>	<b>78,079</b>	<b>80,409</b>	<b>77,792</b>	<b>56,989</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	17,310	20,443	29,655	45,697	61,306	67,029	60,463	58,103	58,110	54,445	52,379	54,738	62,089	60,391
Indirect	16,002	20,013	30,265	46,324	67,401	87,603	91,769	95,960	101,682	105,204	109,063	111,200	119,704	120,330
Induced	19,941	24,595	36,801	56,701	81,567	104,060	107,504	111,503	117,564	120,637	124,546	127,184	137,668	138,027
<b>Total</b>	<b>53,252</b>	<b>65,051</b>	<b>96,720</b>	<b>148,722</b>	<b>210,274</b>	<b>258,692</b>	<b>259,736</b>	<b>265,567</b>	<b>277,356</b>	<b>280,286</b>	<b>285,989</b>	<b>293,121</b>	<b>319,462</b>	<b>318,748</b>
<b>Total Activity</b>														
Direct	494,108	560,634	595,041	633,173	631,557	654,745	664,511	673,279	684,915	709,921	730,689	758,781	789,994	805,381
Indirect	639,772	733,064	803,963	878,063	901,383	949,318	979,968	1,007,367	1,037,106	1,074,918	1,108,961	1,143,363	1,182,838	1,209,647
Induced	991,624	1,140,430	1,256,584	1,376,982	1,410,914	1,478,205	1,525,289	1,568,158	1,614,033	1,666,934	1,714,990	1,764,661	1,820,397	1,859,388
<b>Total</b>	<b>2,125,504</b>	<b>2,434,128</b>	<b>2,655,588</b>	<b>2,888,218</b>	<b>2,943,855</b>	<b>3,082,268</b>	<b>3,169,767</b>	<b>3,248,805</b>	<b>3,336,055</b>	<b>3,451,773</b>	<b>3,554,639</b>	<b>3,666,805</b>	<b>3,793,229</b>	<b>3,874,415</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics



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Employment Contribution by Type due to the Unconventional Activity Value Chain: South Census Region*														
(Number of workers)														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	221,020	245,482	269,945	294,407	304,181	313,955	323,729	333,504	343,278	354,754	366,230	377,707	389,183	400,659
Indirect	294,910	333,073	371,237	409,400	425,078	440,757	456,435	472,114	487,792	503,384	518,976	534,567	550,159	565,751
Induced	433,609	489,342	545,075	600,808	624,616	648,424	672,232	696,040	719,848	740,329	760,810	781,292	801,773	822,254
<b>Total</b>	<b>949,540</b>	<b>1,067,898</b>	<b>1,186,256</b>	<b>1,304,614</b>	<b>1,353,875</b>	<b>1,403,136</b>	<b>1,452,396</b>	<b>1,501,657</b>	<b>1,550,918</b>	<b>1,598,467</b>	<b>1,646,017</b>	<b>1,693,566</b>	<b>1,741,115</b>	<b>1,788,664</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	81,065	93,762	83,361	61,511	35,107	38,154	34,120	27,147	22,015	26,122	23,237	23,733	22,967	17,443
Indirect	61,843	70,950	62,356	45,808	26,155	28,277	25,027	19,982	16,305	19,090	16,975	17,281	16,711	12,759
Induced	85,577	97,002	85,597	62,823	35,916	39,018	34,492	27,555	22,564	26,415	23,403	23,776	22,985	17,658
<b>Total</b>	<b>228,485</b>	<b>261,715</b>	<b>231,314</b>	<b>170,142</b>	<b>97,178</b>	<b>105,449</b>	<b>93,640</b>	<b>74,684</b>	<b>60,884</b>	<b>71,628</b>	<b>63,614</b>	<b>64,790</b>	<b>62,663</b>	<b>47,860</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	16,640	19,762	27,243	40,988	52,305	56,569	51,120	51,658	54,489	50,824	48,758	50,777	56,428	54,389
Indirect	15,376	19,287	28,038	42,149	58,600	76,661	80,395	85,789	93,792	97,287	101,110	102,932	109,860	110,143
Induced	19,365	23,724	33,983	51,362	70,622	90,687	94,242	99,783	108,857	111,911	115,804	118,060	126,628	126,591
<b>Total</b>	<b>51,382</b>	<b>62,773</b>	<b>89,264</b>	<b>134,498</b>	<b>181,527</b>	<b>223,917</b>	<b>225,757</b>	<b>237,230</b>	<b>257,138</b>	<b>260,022</b>	<b>265,672</b>	<b>271,768</b>	<b>292,916</b>	<b>291,123</b>
<b>Total Activity</b>														
Direct	318,725	359,007	380,548	396,906	391,593	408,679	408,970	412,309	419,782	431,700	438,225	452,216	468,579	472,491
Indirect	372,130	423,310	461,631	497,357	509,833	545,694	561,857	577,885	597,888	619,761	637,060	654,781	676,730	688,653
Induced	538,552	610,068	664,656	714,992	731,153	778,129	800,966	823,378	851,269	878,655	900,018	923,128	951,385	966,503
<b>Total</b>	<b>1,229,407</b>	<b>1,392,385</b>	<b>1,506,835</b>	<b>1,609,254</b>	<b>1,632,580</b>	<b>1,732,502</b>	<b>1,771,793</b>	<b>1,813,571</b>	<b>1,868,940</b>	<b>1,930,117</b>	<b>1,975,303</b>	<b>2,030,124</b>	<b>2,096,694</b>	<b>2,127,647</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

<b>Employment Contribution by Type due to the Unconventional Activity Value Chain: Midwest Census Region*</b>														
<b>(Number of workers)</b>														
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Upstream Energy Activity</b>														
Direct	55,753	68,604	81,456	94,308	100,669	107,031	113,393	119,754	126,116	132,916	139,717	146,517	153,318	160,118
Indirect	94,781	111,758	128,735	145,712	153,082	160,452	167,822	175,192	182,562	190,363	198,164	205,964	213,765	221,566
Induced	156,685	186,072	215,458	244,845	256,362	267,880	279,397	290,914	302,432	314,112	325,792	337,471	349,151	360,831
<b>Total</b>	<b>307,219</b>	<b>366,434</b>	<b>425,649</b>	<b>484,864</b>	<b>510,114</b>	<b>535,363</b>	<b>560,612</b>	<b>585,861</b>	<b>611,110</b>	<b>637,391</b>	<b>663,672</b>	<b>689,953</b>	<b>716,234</b>	<b>742,515</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	11,818	15,610	13,924	10,750	4,491	1,845	2,805	2,863	2,478	2,255	2,059	1,866	1,747	1,660
Indirect	9,291	12,081	10,593	8,119	3,416	1,433	2,151	2,204	1,902	1,730	1,584	1,438	1,347	1,273
Induced	13,730	17,828	15,895	12,166	5,095	2,091	3,212	3,266	2,827	2,572	2,346	2,125	1,991	1,890
<b>Total</b>	<b>34,839</b>	<b>45,519</b>	<b>40,413</b>	<b>31,035</b>	<b>13,002</b>	<b>5,369</b>	<b>8,169</b>	<b>8,333</b>	<b>7,208</b>	<b>6,557</b>	<b>5,989</b>	<b>5,429</b>	<b>5,085</b>	<b>4,823</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	249	548	2,316	4,323	6,696	5,500	3,878	1,803	1,803	1,804	1,804	2,143	3,843	4,184
Indirect	235	497	2,029	3,731	6,755	6,761	6,152	4,340	4,340	4,350	4,371	4,691	6,280	6,618
Induced	300	635	2,622	4,833	8,385	7,986	6,933	4,662	4,670	4,680	4,689	5,075	7,004	7,397
<b>Total</b>	<b>784</b>	<b>1,680</b>	<b>6,966</b>	<b>12,888</b>	<b>21,836</b>	<b>20,246</b>	<b>16,963</b>	<b>10,804</b>	<b>10,813</b>	<b>10,834</b>	<b>10,863</b>	<b>11,908</b>	<b>17,127</b>	<b>18,199</b>
<b>Total Activity</b>														
Direct	67,820	84,762	97,696	109,381	111,856	114,375	120,076	124,419	130,397	136,975	143,580	150,526	158,908	165,962
Indirect	104,307	124,336	141,357	157,562	163,253	168,646	176,125	181,736	188,805	196,443	204,118	212,093	221,392	229,457
Induced	170,715	204,535	233,976	261,843	269,842	277,956	289,542	298,842	309,930	321,364	332,826	344,672	358,146	370,117
<b>Total</b>	<b>342,842</b>	<b>413,633</b>	<b>473,029</b>	<b>528,787</b>	<b>544,951</b>	<b>560,977</b>	<b>585,744</b>	<b>604,998</b>	<b>629,131</b>	<b>654,782</b>	<b>680,524</b>	<b>707,291</b>	<b>738,446</b>	<b>765,537</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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<b>Employment Contribution by Type due to the Unconventional Activity Value Chain: Northeast Census Region*</b>														
<b>(Number of workers)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	25,948	32,264	38,580	44,895	47,731	50,568	53,404	56,241	59,077	63,482	67,888	72,293	76,698	81,104
Indirect	55,584	63,558	71,533	79,507	82,866	86,225	89,584	92,944	96,303	100,327	104,351	108,376	112,400	116,425
Induced	114,341	129,512	144,683	159,854	166,251	172,648	179,044	185,441	191,837	198,966	206,095	213,224	220,353	227,481
<b>Total</b>	<b>195,874</b>	<b>225,334</b>	<b>254,795</b>	<b>284,256</b>	<b>296,848</b>	<b>309,441</b>	<b>322,033</b>	<b>334,625</b>	<b>347,217</b>	<b>362,776</b>	<b>378,334</b>	<b>393,893</b>	<b>409,451</b>	<b>425,010</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	18,531	15,041	4,807	1,654	1,296	1,272	1,233	1,212	840	483	445	409	372	337
Indirect	11,409	9,494	3,269	1,346	1,140	1,156	946	747	649	412	379	346	313	279
Induced	18,008	14,790	5,024	1,930	1,598	1,618	1,396	1,196	958	589	540	493	447	403
<b>Total</b>	<b>47,948</b>	<b>39,325</b>	<b>13,100</b>	<b>4,930</b>	<b>4,034</b>	<b>4,045</b>	<b>3,576</b>	<b>3,154</b>	<b>2,447</b>	<b>1,483</b>	<b>1,364</b>	<b>1,248</b>	<b>1,133</b>	<b>1,018</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	-	-	-	-	469	2,827	3,306	4,233	1,408	1,408	1,409	1,409	1,409	1,409
Indirect	-	-	-	-	357	2,196	2,620	4,778	2,495	2,510	2,521	2,516	2,507	2,511
Induced	-	-	-	-	495	2,990	3,513	6,131	3,107	3,113	3,119	3,116	3,106	3,108
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,321</b>	<b>8,013</b>	<b>9,438</b>	<b>15,142</b>	<b>7,010</b>	<b>7,031</b>	<b>7,048</b>	<b>7,041</b>	<b>7,022</b>	<b>7,027</b>
<b>Total Activity</b>														
Direct	44,480	47,305	43,387	46,549	49,497	54,666	57,943	61,685	61,325	65,374	69,742	74,110	78,479	82,849
Indirect	66,993	73,052	74,802	80,853	84,364	89,578	93,150	98,469	99,447	103,248	107,251	111,238	115,220	119,214
Induced	132,349	144,302	149,707	161,784	168,343	177,255	183,953	192,767	195,902	202,668	209,754	216,833	223,906	230,992
<b>Total</b>	<b>243,822</b>	<b>264,659</b>	<b>267,896</b>	<b>289,186</b>	<b>302,204</b>	<b>321,499</b>	<b>335,047</b>	<b>352,920</b>	<b>356,674</b>	<b>371,290</b>	<b>386,747</b>	<b>402,182</b>	<b>417,606</b>	<b>433,055</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

<b>Employment Contribution by Type due to the Unconventional Activity Value Chain: West Census Region*</b>														
<b>(Number of workers)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	57,735	62,585	67,435	72,285	72,218	72,151	72,084	72,016	71,949	74,059	76,169	78,278	80,388	82,498
Indirect	92,387	106,866	121,344	135,822	138,484	141,146	143,807	146,469	149,131	153,387	157,644	161,901	166,157	170,414
Induced	145,850	173,507	201,163	228,820	234,025	239,229	244,434	249,638	254,843	261,790	268,737	275,684	282,631	289,578
<b>Total</b>	<b>295,972</b>	<b>342,957</b>	<b>389,943</b>	<b>436,928</b>	<b>444,727</b>	<b>452,526</b>	<b>460,325</b>	<b>468,124</b>	<b>475,923</b>	<b>489,236</b>	<b>502,549</b>	<b>515,862</b>	<b>529,176</b>	<b>542,489</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	4,928	6,842	5,879	7,666	4,556	2,741	3,279	2,440	1,053	1,404	2,565	3,240	3,231	1,172
Indirect	3,789	5,271	4,632	6,024	3,761	2,270	2,425	1,755	780	1,021	1,826	2,290	2,281	850
Induced	5,544	7,782	6,887	9,036	5,486	3,238	3,576	2,605	1,159	1,524	2,721	3,412	3,398	1,266
<b>Total</b>	<b>14,261</b>	<b>19,895</b>	<b>17,397</b>	<b>22,726</b>	<b>13,803</b>	<b>8,248</b>	<b>9,281</b>	<b>6,800</b>	<b>2,992</b>	<b>3,949</b>	<b>7,111</b>	<b>8,942</b>	<b>8,911</b>	<b>3,288</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	420	133	96	386	1,836	2,133	2,159	409	409	410	410	410	410	410
Indirect	467	229	198	445	1,689	1,985	2,603	1,054	1,055	1,057	1,062	1,061	1,057	1,059
Induced	548	236	196	506	2,065	2,397	2,817	928	930	932	934	933	930	931
<b>Total</b>	<b>1,436</b>	<b>598</b>	<b>490</b>	<b>1,337</b>	<b>5,590</b>	<b>6,515</b>	<b>7,579</b>	<b>2,391</b>	<b>2,395</b>	<b>2,399</b>	<b>2,406</b>	<b>2,403</b>	<b>2,397</b>	<b>2,400</b>
<b>Total Activity</b>														
Direct	63,083	69,560	73,410	80,337	78,610	77,025	77,522	74,866	73,411	75,872	79,143	81,928	84,028	84,079
Indirect	96,643	112,365	126,173	142,291	143,934	145,400	148,836	149,278	150,966	155,466	160,532	165,251	169,496	172,323
Induced	151,942	181,524	208,246	238,362	241,576	244,864	250,827	253,171	256,932	264,247	272,391	280,028	286,959	291,775
<b>Total</b>	<b>311,669</b>	<b>363,450</b>	<b>407,829</b>	<b>460,990</b>	<b>464,120</b>	<b>467,289</b>	<b>477,184</b>	<b>477,315</b>	<b>481,309</b>	<b>495,584</b>	<b>512,066</b>	<b>527,208</b>	<b>540,484</b>	<b>548,177</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

## Value Added Contribution

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US Lower 48 Value Added Contribution due to the Unconventional Activity Value Chain: Base Case*														
(2012 \$M)														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>South Census Region</b>														
Upstream Energy Activity	146,620	167,716	188,812	209,908	217,531	225,154	232,777	240,400	248,023	253,395	258,767	264,139	269,511	274,883
Midstream and Downstream Energy Activity	27,066	31,180	27,768	20,388	11,585	12,539	11,035	8,871	7,286	8,495	7,506	7,608	7,352	5,682
Energy-Related Chemicals Activity	6,494	8,104	11,713	17,740	24,655	32,245	33,967	36,032	39,681	41,140	42,931	43,699	46,763	46,893
<b>Total Activity</b>	<b>180,180</b>	<b>207,001</b>	<b>228,293</b>	<b>248,036</b>	<b>253,771</b>	<b>269,937</b>	<b>277,780</b>	<b>285,303</b>	<b>294,990</b>	<b>303,030</b>	<b>309,205</b>	<b>315,446</b>	<b>323,626</b>	<b>327,458</b>
<b>Midwest Census Region</b>														
Upstream Energy Activity	30,355	36,529	42,704	48,878	51,785	54,692	57,600	60,507	63,414	66,162	68,909	71,656	74,404	77,151
Midstream and Downstream Energy Activity	4,198	5,515	4,938	3,775	1,577	655	1,000	1,021	884	806	734	665	623	592
Energy-Related Chemicals Activity	96	204	839	1,547	2,722	2,628	2,327	1,600	1,608	1,608	1,612	1,737	2,359	2,486
<b>Total Activity</b>	<b>34,649</b>	<b>42,249</b>	<b>48,481</b>	<b>54,200</b>	<b>56,084</b>	<b>57,975</b>	<b>60,926</b>	<b>63,128</b>	<b>65,906</b>	<b>68,576</b>	<b>71,255</b>	<b>74,058</b>	<b>77,386</b>	<b>80,229</b>
<b>Northeast Census Region</b>														
Upstream Energy Activity	24,475	28,686	32,897	37,107	38,877	40,647	42,417	44,186	45,956	48,027	50,098	52,169	54,240	56,310
Midstream and Downstream Energy Activity	6,342	5,338	1,859	738	614	624	527	436	363	228	209	190	172	155
Energy-Related Chemicals Activity	-	-	-	-	190	1,142	1,341	2,429	1,281	1,284	1,286	1,285	1,283	1,284
<b>Total Activity</b>	<b>30,817</b>	<b>34,024</b>	<b>34,755</b>	<b>37,845</b>	<b>39,681</b>	<b>42,413</b>	<b>44,285</b>	<b>47,051</b>	<b>47,601</b>	<b>49,539</b>	<b>51,593</b>	<b>53,644</b>	<b>55,695</b>	<b>57,750</b>
<b>West Census Region</b>														
Upstream Energy Activity	36,234	42,036	47,838	53,640	54,743	55,847	56,951	58,054	59,158	60,654	62,150	63,647	65,143	66,639
Midstream and Downstream Energy Activity	1,852	2,625	2,354	3,090	1,882	1,114	1,205	873	394	516	910	1,137	1,132	428
Energy-Related Chemicals Activity	200	92	78	189	740	854	1,043	376	379	379	380	380	379	379
<b>Total Activity</b>	<b>38,287</b>	<b>44,754</b>	<b>50,270</b>	<b>56,918</b>	<b>57,366</b>	<b>57,815</b>	<b>59,199</b>	<b>59,304</b>	<b>59,930</b>	<b>61,548</b>	<b>63,440</b>	<b>65,163</b>	<b>66,654</b>	<b>67,446</b>
<b>United States</b>														
Upstream Energy Activity	237,684	274,967	312,250	349,533	362,937	376,340	389,744	403,148	416,551	428,238	439,925	451,611	463,298	474,985
Midstream and Downstream Energy Activity	39,327	44,659	36,919	27,991	15,657	14,931	13,767	11,202	8,927	10,044	9,359	9,600	9,279	6,857
Energy-Related Chemicals Activity	6,766	8,401	12,630	19,475	28,307	36,869	38,678	40,437	42,949	44,411	46,209	47,100	50,784	51,041
<b>Total Activity</b>	<b>283,777</b>	<b>328,027</b>	<b>361,799</b>	<b>396,999</b>	<b>406,901</b>	<b>428,140</b>	<b>442,189</b>	<b>454,786</b>	<b>468,427</b>	<b>482,693</b>	<b>495,493</b>	<b>508,312</b>	<b>523,362</b>	<b>532,884</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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Value Added Contribution by Type due to the Unconventional Activity Value Chain: United States*														
(2012 \$M)														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	96,700	112,894	129,088	145,281	150,923	156,565	162,208	167,850	173,492	177,439	181,387	185,335	189,282	193,230
Indirect	67,171	77,161	87,152	97,142	100,832	104,522	108,211	111,901	115,591	119,311	123,032	126,753	130,474	134,195
Induced	73,813	84,912	96,011	107,110	111,181	115,253	119,325	123,397	127,469	131,487	135,505	139,523	143,541	147,559
<b>Total</b>	<b>237,684</b>	<b>274,967</b>	<b>312,250</b>	<b>349,533</b>	<b>362,937</b>	<b>376,340</b>	<b>389,744</b>	<b>403,148</b>	<b>416,551</b>	<b>428,238</b>	<b>439,925</b>	<b>451,611</b>	<b>463,298</b>	<b>474,985</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	11,768	13,388	11,100	8,406	4,663	4,417	4,029	3,328	2,659	2,956	2,747	2,806	2,710	2,025
Indirect	12,405	14,091	11,640	8,838	4,981	4,766	4,402	3,545	2,828	3,199	2,985	3,067	2,965	2,180
Induced	15,153	17,180	14,179	10,747	6,013	5,747	5,336	4,329	3,439	3,889	3,627	3,727	3,604	2,653
<b>Total</b>	<b>39,327</b>	<b>44,659</b>	<b>36,919</b>	<b>27,991</b>	<b>15,657</b>	<b>14,931</b>	<b>13,767</b>	<b>11,202</b>	<b>8,927</b>	<b>10,044</b>	<b>9,359</b>	<b>9,600</b>	<b>9,279</b>	<b>6,857</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	1,797	2,149	3,142	4,905	6,900	8,394	8,351	8,475	8,878	8,898	9,113	9,350	10,258	10,198
Indirect	2,475	3,175	4,886	7,479	11,207	15,463	16,885	18,021	19,371	20,430	21,524	21,849	23,315	23,587
Induced	2,494	3,076	4,602	7,091	10,200	13,012	13,442	13,942	14,699	15,083	15,571	15,901	17,212	17,257
<b>Total</b>	<b>6,766</b>	<b>8,401</b>	<b>12,630</b>	<b>19,475</b>	<b>28,307</b>	<b>36,869</b>	<b>38,678</b>	<b>40,437</b>	<b>42,949</b>	<b>44,411</b>	<b>46,209</b>	<b>47,100</b>	<b>50,784</b>	<b>51,041</b>
<b>Total Activity</b>														
Direct	110,265	128,432	143,329	158,592	162,486	169,377	174,587	179,653	185,029	189,294	193,247	197,492	202,250	205,452
Indirect	82,051	94,427	103,678	113,459	117,020	124,751	129,499	133,466	137,790	142,941	147,542	151,669	156,754	159,962
Induced	91,461	105,168	114,792	124,948	127,395	134,013	138,103	141,667	145,607	150,458	154,703	159,151	164,357	167,469
<b>Total</b>	<b>283,777</b>	<b>328,027</b>	<b>361,799</b>	<b>396,999</b>	<b>406,901</b>	<b>428,140</b>	<b>442,189</b>	<b>454,786</b>	<b>468,427</b>	<b>482,693</b>	<b>495,493</b>	<b>508,312</b>	<b>523,362</b>	<b>532,884</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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Value Added Contribution by Type due to the Unconventional Activity Value Chain: South Census Region*														
(2012 \$M)														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	70,522	81,760	92,997	104,234	107,795	111,356	114,917	118,478	122,039	123,834	125,628	127,422	129,217	131,011
Indirect	39,126	44,355	49,583	54,811	56,861	58,910	60,959	63,009	65,058	66,908	68,758	70,608	72,458	74,308
Induced	36,971	41,602	46,232	50,863	52,875	54,888	56,900	58,913	60,925	62,653	64,381	66,109	67,837	69,565
<b>Total</b>	<b>146,620</b>	<b>167,716</b>	<b>188,812</b>	<b>209,908</b>	<b>217,531</b>	<b>225,154</b>	<b>232,777</b>	<b>240,400</b>	<b>248,023</b>	<b>253,395</b>	<b>258,767</b>	<b>264,139</b>	<b>269,511</b>	<b>274,883</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	8,081	9,342	8,343	6,108	3,451	3,720	3,215	2,626	2,166	2,491	2,193	2,212	2,135	1,671
Indirect	8,705	10,029	8,865	6,523	3,718	4,012	3,571	2,848	2,328	2,728	2,424	2,466	2,384	1,824
Induced	10,279	11,809	10,561	7,757	4,416	4,807	4,249	3,398	2,792	3,276	2,890	2,931	2,833	2,188
<b>Total</b>	<b>27,066</b>	<b>31,180</b>	<b>27,768</b>	<b>20,388</b>	<b>11,585</b>	<b>12,539</b>	<b>11,035</b>	<b>8,871</b>	<b>7,286</b>	<b>8,495</b>	<b>7,506</b>	<b>7,608</b>	<b>7,352</b>	<b>5,682</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	1,724	2,077	2,893	4,422	5,946	7,246	7,287	7,581	8,301	8,322	8,538	8,740	9,475	9,380
Indirect	2,369	3,063	4,567	6,891	9,898	13,749	15,008	16,137	17,859	18,916	20,006	20,288	21,541	21,769
Induced	2,401	2,965	4,253	6,427	8,812	11,250	11,673	12,314	13,521	13,902	14,388	14,671	15,747	15,744
<b>Total</b>	<b>6,494</b>	<b>8,104</b>	<b>11,713</b>	<b>17,740</b>	<b>24,655</b>	<b>32,245</b>	<b>33,967</b>	<b>36,032</b>	<b>39,681</b>	<b>41,140</b>	<b>42,931</b>	<b>43,699</b>	<b>46,763</b>	<b>46,893</b>
<b>Total Activity</b>														
Direct	80,327	93,178	104,232	114,764	117,192	122,322	125,419	128,685	132,507	134,646	136,358	138,374	140,826	142,062
Indirect	50,201	57,447	63,015	68,226	70,476	76,670	79,539	81,994	85,245	88,552	91,188	93,361	96,383	97,900
Induced	49,651	56,376	61,046	65,046	66,103	70,945	72,822	74,624	77,238	79,831	81,659	83,710	86,417	87,496
<b>Total</b>	<b>180,180</b>	<b>207,001</b>	<b>228,293</b>	<b>248,036</b>	<b>253,771</b>	<b>269,937</b>	<b>277,780</b>	<b>285,303</b>	<b>294,990</b>	<b>303,030</b>	<b>309,205</b>	<b>315,446</b>	<b>323,626</b>	<b>327,458</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics



<b>Value Added Contribution by Type due to the Unconventional Activity Value Chain: Midwest Census Region*</b>														
<b>(2012 \$M)</b>														
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Upstream Energy Activity</b>														
Direct	6,648	8,522	10,396	12,270	13,471	14,672	15,873	17,075	18,276	19,267	20,259	21,250	22,242	23,233
Indirect	10,459	12,302	14,145	15,987	16,771	17,556	18,340	19,124	19,908	20,713	21,518	22,323	23,127	23,932
Induced	13,247	15,705	18,163	20,621	21,543	22,464	23,386	24,308	25,230	26,181	27,132	28,084	29,035	29,986
<b>Total</b>	<b>30,355</b>	<b>36,529</b>	<b>42,704</b>	<b>48,878</b>	<b>51,785</b>	<b>54,692</b>	<b>57,600</b>	<b>60,507</b>	<b>63,414</b>	<b>66,162</b>	<b>68,909</b>	<b>71,656</b>	<b>74,404</b>	<b>77,151</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	1,299	1,704	1,514	1,152	480	201	307	315	272	248	226	205	192	182
Indirect	1,287	1,692	1,508	1,157	484	201	305	312	269	246	224	203	191	180
Induced	1,611	2,119	1,915	1,466	612	253	388	394	342	313	284	257	240	229
<b>Total</b>	<b>4,198</b>	<b>5,515</b>	<b>4,938</b>	<b>3,775</b>	<b>1,577</b>	<b>655</b>	<b>1,000</b>	<b>1,021</b>	<b>884</b>	<b>806</b>	<b>734</b>	<b>665</b>	<b>623</b>	<b>592</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	26	57	237	440	704	605	468	261	261	260	260	295	467	502
Indirect	33	69	280	513	993	1,051	1,016	773	776	776	778	821	1,035	1,079
Induced	37	78	322	593	1,025	972	843	566	571	572	573	621	857	905
<b>Total</b>	<b>96</b>	<b>204</b>	<b>839</b>	<b>1,547</b>	<b>2,722</b>	<b>2,628</b>	<b>2,327</b>	<b>1,600</b>	<b>1,608</b>	<b>1,608</b>	<b>1,612</b>	<b>1,737</b>	<b>2,359</b>	<b>2,486</b>
<b>Total Activity</b>														
Direct	7,973	10,283	12,147	13,862	14,656	15,478	16,648	17,651	18,809	19,775	20,745	21,750	22,901	23,917
Indirect	11,780	14,063	15,933	17,658	18,248	18,808	19,661	20,209	20,954	21,735	22,520	23,347	24,353	25,192
Induced	14,895	17,902	20,400	22,680	23,180	23,689	24,617	25,268	26,143	27,066	27,989	28,961	30,132	31,120
<b>Total</b>	<b>34,649</b>	<b>42,249</b>	<b>48,481</b>	<b>54,200</b>	<b>56,084</b>	<b>57,975</b>	<b>60,926</b>	<b>63,128</b>	<b>65,906</b>	<b>68,576</b>	<b>71,255</b>	<b>74,058</b>	<b>77,386</b>	<b>80,229</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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<b>Value Added Contribution by Type due to the Unconventional Activity Value Chain: Northeast Census Region*</b>														
<b>(2012 \$M)</b>														
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Upstream Energy Activity</b>														
Direct	6,075	7,774	9,472	11,171	11,875	12,579	13,283	13,987	14,691	15,572	16,453	17,333	18,214	19,095
Indirect	7,287	8,385	9,483	10,581	11,051	11,521	11,991	12,461	12,931	13,469	14,007	14,546	15,084	15,622
Induced	11,113	12,527	13,941	15,355	15,951	16,547	17,143	17,739	18,334	18,986	19,638	20,290	20,942	21,594
<b>Total</b>	<b>24,475</b>	<b>28,686</b>	<b>32,897</b>	<b>37,107</b>	<b>38,877</b>	<b>40,647</b>	<b>42,417</b>	<b>44,186</b>	<b>45,956</b>	<b>48,027</b>	<b>50,098</b>	<b>52,169</b>	<b>54,240</b>	<b>56,310</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	1,819	1,542	529	203	165	167	147	127	101	63	58	53	48	43
Indirect	1,878	1,590	566	241	207	211	168	127	115	75	68	62	56	50
Induced	2,645	2,207	764	294	242	246	212	182	146	90	82	75	68	62
<b>Total</b>	<b>6,342</b>	<b>5,338</b>	<b>1,859</b>	<b>738</b>	<b>614</b>	<b>624</b>	<b>527</b>	<b>436</b>	<b>363</b>	<b>228</b>	<b>209</b>	<b>190</b>	<b>172</b>	<b>155</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	-	-	-	-	53	316	368	588	271	271	271	271	271	271
Indirect	-	-	-	-	60	367	435	906	531	533	534	534	533	533
Induced	-	-	-	-	77	459	538	935	479	480	481	480	479	480
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>190</b>	<b>1,142</b>	<b>1,341</b>	<b>2,429</b>	<b>1,281</b>	<b>1,284</b>	<b>1,286</b>	<b>1,285</b>	<b>1,283</b>	<b>1,284</b>
<b>Total Activity</b>														
Direct	7,894	9,315	10,001	11,373	12,093	13,062	13,798	14,702	15,064	15,906	16,782	17,657	18,533	19,409
Indirect	9,165	9,975	10,049	10,823	11,318	12,099	12,594	13,494	13,577	14,077	14,610	15,142	15,673	16,205
Induced	13,758	14,734	14,705	15,649	16,269	17,252	17,893	18,855	18,959	19,556	20,201	20,845	21,489	22,135
<b>Total</b>	<b>30,817</b>	<b>34,024</b>	<b>34,755</b>	<b>37,845</b>	<b>39,681</b>	<b>42,413</b>	<b>44,285</b>	<b>47,051</b>	<b>47,601</b>	<b>49,539</b>	<b>51,593</b>	<b>53,644</b>	<b>55,695</b>	<b>57,750</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

<b>Value Added Contribution by Type due to the Unconventional Activity Value Chain: West Census Region*</b>														
<b>(2012 \$M)</b>														
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Upstream Energy Activity</b>														
Direct	13,455	14,839	16,223	17,606	17,782	17,958	18,134	18,310	18,486	18,767	19,048	19,329	19,610	19,891
Indirect	10,298	12,119	13,941	15,763	16,149	16,535	16,921	17,307	17,693	18,221	18,749	19,277	19,805	20,333
Induced	12,482	15,078	17,674	20,271	20,812	21,354	21,896	22,437	22,979	23,666	24,353	25,041	25,728	26,415
<b>Total</b>	<b>36,234</b>	<b>42,036</b>	<b>47,838</b>	<b>53,640</b>	<b>54,743</b>	<b>55,847</b>	<b>56,951</b>	<b>58,054</b>	<b>59,158</b>	<b>60,654</b>	<b>62,150</b>	<b>63,647</b>	<b>65,143</b>	<b>66,639</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	568	801	714	943	566	329	360	260	119	155	270	337	335	128
Indirect	550	780	701	916	572	343	358	258	116	151	268	336	334	126
Induced	734	1,044	939	1,231	744	442	487	355	159	210	371	465	463	174
<b>Total</b>	<b>1,852</b>	<b>2,625</b>	<b>2,354</b>	<b>3,090</b>	<b>1,882</b>	<b>1,114</b>	<b>1,205</b>	<b>873</b>	<b>394</b>	<b>516</b>	<b>910</b>	<b>1,137</b>	<b>1,132</b>	<b>428</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	47	16	12	43	197	227	229	45	45	45	45	45	45	45
Indirect	78	43	38	75	256	296	426	204	205	205	206	206	206	206
Induced	76	33	27	71	287	331	388	127	129	129	129	129	129	129
<b>Total</b>	<b>200</b>	<b>92</b>	<b>78</b>	<b>189</b>	<b>740</b>	<b>854</b>	<b>1,043</b>	<b>376</b>	<b>379</b>	<b>379</b>	<b>380</b>	<b>380</b>	<b>379</b>	<b>379</b>
<b>Total Activity</b>														
Direct	14,070	15,656	16,949	18,593	18,546	18,515	18,723	18,615	18,650	18,966	19,363	19,710	19,990	20,064
Indirect	10,925	12,942	14,680	16,753	16,977	17,174	17,705	17,769	18,014	18,578	19,223	19,819	20,345	20,665
Induced	13,291	16,155	18,641	21,572	21,843	22,126	22,771	22,920	23,267	24,005	24,854	25,634	26,319	26,718
<b>Total</b>	<b>38,287</b>	<b>44,754</b>	<b>50,270</b>	<b>56,918</b>	<b>57,366</b>	<b>57,815</b>	<b>59,199</b>	<b>59,304</b>	<b>59,930</b>	<b>61,548</b>	<b>63,440</b>	<b>65,163</b>	<b>66,654</b>	<b>67,446</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

# Labor Income Contribution

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US Lower 48 Labor Income Contribution due to the Unconventional Activity Value Chain: Base Case*														
(2012 \$M)														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>South Census Region</b>														
Upstream Energy Activity	75,544	85,824	96,105	106,386	110,244	114,103	117,961	121,820	125,678	128,910	132,141	135,373	138,604	141,836
Midstream and Downstream Energy Activity	14,536	16,763	14,943	10,958	6,219	6,757	5,909	4,773	3,914	4,560	4,028	4,084	3,946	3,051
Energy-Related Chemicals Activity	3,611	4,488	6,452	9,730	13,366	17,115	17,781	18,732	20,519	21,106	21,874	22,300	23,943	23,965
<b>Total Activity</b>	<b>93,690</b>	<b>107,075</b>	<b>117,500</b>	<b>127,075</b>	<b>129,829</b>	<b>137,975</b>	<b>141,651</b>	<b>145,324</b>	<b>150,111</b>	<b>154,576</b>	<b>158,043</b>	<b>161,757</b>	<b>166,493</b>	<b>168,851</b>
<b>Midwest Census Region</b>														
Upstream Energy Activity	16,591	19,833	23,076	26,319	27,817	29,315	30,814	32,312	33,810	35,329	36,848	38,367	39,886	41,405
Midstream and Downstream Energy Activity	2,260	2,971	2,659	2,030	847	354	537	551	476	434	396	359	336	319
Energy-Related Chemicals Activity	53	114	469	859	1,484	1,395	1,209	813	813	809	806	873	1,203	1,269
<b>Total Activity</b>	<b>18,904</b>	<b>22,918</b>	<b>26,204</b>	<b>29,209</b>	<b>30,148</b>	<b>31,065</b>	<b>32,560</b>	<b>33,676</b>	<b>35,099</b>	<b>36,572</b>	<b>38,050</b>	<b>39,599</b>	<b>41,425</b>	<b>42,992</b>
<b>Northeast Census Region</b>														
Upstream Energy Activity	13,273	15,424	17,575	19,725	20,640	21,554	22,469	23,383	24,297	25,426	26,555	27,684	28,812	29,941
Midstream and Downstream Energy Activity	3,376	2,846	991	393	326	333	280	233	194	121	111	102	92	83
Energy-Related Chemicals Activity	-	-	-	-	104	617	718	1,277	661	659	657	657	658	658
<b>Total Activity</b>	<b>16,649</b>	<b>18,270</b>	<b>18,565</b>	<b>20,118</b>	<b>21,070</b>	<b>22,504</b>	<b>23,467</b>	<b>24,892</b>	<b>25,152</b>	<b>26,207</b>	<b>27,323</b>	<b>28,443</b>	<b>29,562</b>	<b>30,682</b>
<b>West Census Region</b>														
Upstream Energy Activity	19,133	22,202	25,271	28,339	28,941	29,542	30,144	30,745	31,347	32,233	33,119	34,005	34,891	35,777
Midstream and Downstream Energy Activity	995	1,410	1,265	1,659	1,009	599	645	468	211	276	487	609	607	229
Energy-Related Chemicals Activity	110	49	41	102	404	460	546	187	188	187	186	186	187	187
<b>Total Activity</b>	<b>20,238</b>	<b>23,661</b>	<b>26,576</b>	<b>30,101</b>	<b>30,354</b>	<b>30,601</b>	<b>31,334</b>	<b>31,401</b>	<b>31,745</b>	<b>32,696</b>	<b>33,792</b>	<b>34,800</b>	<b>35,684</b>	<b>36,193</b>
<b>United States</b>														
Upstream Energy Activity	124,541	143,284	162,027	180,770	187,642	194,515	201,387	208,260	215,132	221,897	228,662	235,427	242,192	248,957
Midstream and Downstream Energy Activity	21,107	23,989	19,857	15,040	8,401	8,043	7,371	6,025	4,795	5,392	5,022	5,153	4,981	3,682
Energy-Related Chemicals Activity	3,763	4,651	6,962	10,692	15,358	19,588	20,253	21,008	22,181	22,761	23,524	24,017	25,990	26,078
<b>Total Activity</b>	<b>149,411</b>	<b>171,924</b>	<b>188,846</b>	<b>206,502</b>	<b>211,401</b>	<b>222,145</b>	<b>229,012</b>	<b>235,293</b>	<b>242,108</b>	<b>250,051</b>	<b>257,208</b>	<b>264,598</b>	<b>273,163</b>	<b>278,717</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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<b>Labor Income Contribution by Type due to the Unconventional Activity Value Chain: United States*</b>														
(2012 \$M)														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	43,608	50,379	57,150	63,921	66,363	68,805	71,247	73,689	76,131	78,346	80,560	82,775	84,989	87,204
Indirect	39,250	44,955	50,660	56,365	58,496	60,627	62,758	64,889	67,021	69,302	71,584	73,865	76,147	78,428
Induced	41,682	47,949	54,217	60,484	62,783	65,083	67,382	69,681	71,981	74,250	76,519	78,788	81,057	83,326
<b>Total</b>	<b>124,541</b>	<b>143,284</b>	<b>162,027</b>	<b>180,770</b>	<b>187,642</b>	<b>194,515</b>	<b>201,387</b>	<b>208,260</b>	<b>215,132</b>	<b>221,897</b>	<b>228,662</b>	<b>235,427</b>	<b>242,192</b>	<b>248,957</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	7,974	9,083	7,543	5,703	3,160	3,022	2,729	2,269	1,806	2,011	1,868	1,912	1,846	1,377
Indirect	6,459	7,339	6,068	4,604	2,593	2,489	2,292	1,850	1,474	1,668	1,556	1,600	1,547	1,137
Induced	6,675	7,567	6,246	4,734	2,649	2,532	2,350	1,907	1,515	1,713	1,598	1,642	1,587	1,168
<b>Total</b>	<b>21,107</b>	<b>23,989</b>	<b>19,857</b>	<b>15,040</b>	<b>8,401</b>	<b>8,043</b>	<b>7,371</b>	<b>6,025</b>	<b>4,795</b>	<b>5,392</b>	<b>5,022</b>	<b>5,153</b>	<b>4,981</b>	<b>3,682</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	1,371	1,654	2,427	3,731	5,185	6,193	6,085	6,130	6,361	6,329	6,410	6,588	7,248	7,207
Indirect	1,294	1,642	2,508	3,837	5,680	7,663	8,247	8,738	9,345	9,789	10,255	10,425	11,161	11,270
Induced	1,099	1,355	2,027	3,124	4,493	5,732	5,921	6,141	6,475	6,643	6,859	7,004	7,581	7,601
<b>Total</b>	<b>3,763</b>	<b>4,651</b>	<b>6,962</b>	<b>10,692</b>	<b>15,358</b>	<b>19,588</b>	<b>20,253</b>	<b>21,008</b>	<b>22,181</b>	<b>22,761</b>	<b>23,524</b>	<b>24,017</b>	<b>25,990</b>	<b>26,078</b>
<b>Total Activity</b>														
Direct	52,953	61,116	67,120	73,355	74,707	78,019	80,061	82,087	84,298	86,685	88,839	91,275	94,084	95,788
Indirect	47,003	53,937	59,236	64,805	66,768	70,780	73,297	75,477	77,839	80,759	83,395	85,890	88,855	90,834
Induced	49,455	56,872	62,490	68,342	69,926	73,346	75,653	77,729	79,970	82,606	84,975	87,433	90,226	92,096
<b>Total</b>	<b>149,411</b>	<b>171,924</b>	<b>188,846</b>	<b>206,502</b>	<b>211,401</b>	<b>222,145</b>	<b>229,012</b>	<b>235,293</b>	<b>242,108</b>	<b>250,051</b>	<b>257,208</b>	<b>264,598</b>	<b>273,163</b>	<b>278,717</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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<b>Labor Income Contribution by Type due to the Unconventional Activity Value Chain: South Census Region*</b>														
<b>(2012 \$M)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	31,803	36,489	41,175	45,861	47,399	48,938	50,476	52,014	53,553	54,667	55,782	56,896	58,010	59,125
Indirect	22,863	25,843	28,823	31,803	32,987	34,170	35,354	36,538	37,721	38,863	40,004	41,145	42,287	43,428
Induced	20,878	23,492	26,107	28,722	29,858	30,995	32,131	33,268	34,404	35,380	36,356	37,331	38,307	39,283
<b>Total</b>	<b>75,544</b>	<b>85,824</b>	<b>96,105</b>	<b>106,386</b>	<b>110,244</b>	<b>114,103</b>	<b>117,961</b>	<b>121,820</b>	<b>125,678</b>	<b>128,910</b>	<b>132,141</b>	<b>135,373</b>	<b>138,604</b>	<b>141,836</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	5,476	6,337	5,670	4,144	2,339	2,545	2,178	1,790	1,471	1,695	1,491	1,507	1,454	1,136
Indirect	4,532	5,224	4,621	3,398	1,935	2,095	1,859	1,486	1,213	1,423	1,264	1,286	1,244	951
Induced	4,528	5,202	4,652	3,417	1,945	2,117	1,872	1,497	1,230	1,443	1,273	1,291	1,248	964
<b>Total</b>	<b>14,536</b>	<b>16,763</b>	<b>14,943</b>	<b>10,958</b>	<b>6,219</b>	<b>6,757</b>	<b>5,909</b>	<b>4,773</b>	<b>3,914</b>	<b>4,560</b>	<b>4,028</b>	<b>4,084</b>	<b>3,946</b>	<b>3,051</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	1,315	1,598	2,235	3,364	4,468	5,346	5,309	5,484	5,948	5,919	6,005	6,158	6,694	6,629
Indirect	1,239	1,584	2,344	3,535	5,016	6,814	7,331	7,824	8,615	9,064	9,532	9,680	10,312	10,401
Induced	1,058	1,306	1,873	2,831	3,882	4,956	5,141	5,424	5,956	6,123	6,337	6,462	6,936	6,934
<b>Total</b>	<b>3,611</b>	<b>4,488</b>	<b>6,452</b>	<b>9,730</b>	<b>13,366</b>	<b>17,115</b>	<b>17,781</b>	<b>18,732</b>	<b>20,519</b>	<b>21,106</b>	<b>21,874</b>	<b>22,300</b>	<b>23,943</b>	<b>23,965</b>
<b>Total Activity</b>														
Direct	38,593	44,424	49,079	53,369	54,206	56,828	57,963	59,288	60,972	62,281	63,278	64,561	66,159	66,890
Indirect	28,634	32,651	35,788	38,736	39,938	43,079	44,544	45,848	47,550	49,349	50,800	52,112	53,843	54,780
Induced	26,463	30,000	32,632	34,970	35,685	38,068	39,144	40,188	41,590	42,946	43,966	45,084	46,491	47,181
<b>Total</b>	<b>93,690</b>	<b>107,075</b>	<b>117,500</b>	<b>127,075</b>	<b>129,829</b>	<b>137,975</b>	<b>141,651</b>	<b>145,324</b>	<b>150,111</b>	<b>154,576</b>	<b>158,043</b>	<b>161,757</b>	<b>166,493</b>	<b>168,851</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

<b>Labor Income Contribution by Type due to the Unconventional Activity Value Chain: Midwest Census Region*</b>														
<b>(2012 \$M)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	2,998	3,798	4,598	5,399	5,923	6,447	6,971	7,495	8,020	8,513	9,006	9,499	9,992	10,485
Indirect	6,112	7,167	8,221	9,276	9,730	10,183	10,636	11,090	11,543	12,032	12,520	13,009	13,498	13,987
Induced	7,481	8,869	10,257	11,644	12,165	12,686	13,206	13,727	14,247	14,784	15,322	15,859	16,396	16,933
<b>Total</b>	<b>16,591</b>	<b>19,833</b>	<b>23,076</b>	<b>26,319</b>	<b>27,817</b>	<b>29,315</b>	<b>30,814</b>	<b>32,312</b>	<b>33,810</b>	<b>35,329</b>	<b>36,848</b>	<b>38,367</b>	<b>39,886</b>	<b>41,405</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	880	1,156	1,029	782	326	137	208	215	185	169	154	140	131	124
Indirect	670	881	786	603	252	105	159	163	140	128	117	106	99	94
Induced	710	933	844	646	270	111	171	174	151	138	125	113	106	101
<b>Total</b>	<b>2,260</b>	<b>2,971</b>	<b>2,659</b>	<b>2,030</b>	<b>847</b>	<b>354</b>	<b>537</b>	<b>551</b>	<b>476</b>	<b>434</b>	<b>396</b>	<b>359</b>	<b>336</b>	<b>319</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	20	44	183	335	529	446	341	189	187	185	183	208	330	355
Indirect	17	36	144	263	503	521	496	375	374	372	371	392	495	516
Induced	16	34	142	261	452	428	371	249	251	252	253	273	377	398
<b>Total</b>	<b>53</b>	<b>114</b>	<b>469</b>	<b>859</b>	<b>1,484</b>	<b>1,395</b>	<b>1,209</b>	<b>813</b>	<b>813</b>	<b>809</b>	<b>806</b>	<b>873</b>	<b>1,203</b>	<b>1,269</b>
<b>Total Activity</b>														
Direct	3,898	4,998	5,810	6,515	6,777	7,031	7,520	7,899	8,392	8,866	9,343	9,846	10,453	10,964
Indirect	6,799	8,084	9,152	10,142	10,485	10,809	11,292	11,627	12,058	12,532	13,008	13,507	14,093	14,596
Induced	8,207	9,836	11,242	12,551	12,886	13,225	13,748	14,149	14,649	15,174	15,699	16,245	16,879	17,432
<b>Total</b>	<b>18,904</b>	<b>22,918</b>	<b>26,204</b>	<b>29,209</b>	<b>30,148</b>	<b>31,065</b>	<b>32,560</b>	<b>33,676</b>	<b>35,099</b>	<b>36,572</b>	<b>38,050</b>	<b>39,599</b>	<b>41,425</b>	<b>42,992</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics



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<b>Labor Income Contribution by Type due to the Unconventional Activity Value Chain: Northeast Census Region*</b>														
<b>(2012 \$M)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	2,740	3,465	4,190	4,915	5,221	5,528	5,834	6,140	6,447	6,881	7,315	7,749	8,183	8,617
Indirect	4,258	4,885	5,512	6,140	6,411	6,683	6,954	7,226	7,497	7,824	8,150	8,477	8,803	9,130
Induced	6,275	7,074	7,872	8,671	9,007	9,344	9,680	10,017	10,353	10,721	11,089	11,458	11,826	12,194
<b>Total</b>	<b>13,273</b>	<b>15,424</b>	<b>17,575</b>	<b>19,725</b>	<b>20,640</b>	<b>21,554</b>	<b>22,469</b>	<b>23,383</b>	<b>24,297</b>	<b>25,426</b>	<b>26,555</b>	<b>27,684</b>	<b>28,812</b>	<b>29,941</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	1,232	1,046	359	137	112	114	100	87	69	43	39	36	33	30
Indirect	978	828	295	126	108	110	87	66	60	39	36	33	29	26
Induced	1,165	972	336	129	106	108	93	80	64	40	36	33	30	27
<b>Total</b>	<b>3,376</b>	<b>2,846</b>	<b>991</b>	<b>393</b>	<b>326</b>	<b>333</b>	<b>280</b>	<b>233</b>	<b>194</b>	<b>121</b>	<b>111</b>	<b>102</b>	<b>92</b>	<b>83</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	-	-	-	-	40	233	268	425	194	193	191	191	192	192
Indirect	-	-	-	-	31	182	212	439	256	255	255	255	255	255
Induced	-	-	-	-	34	202	237	412	211	211	212	212	211	211
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>104</b>	<b>617</b>	<b>718</b>	<b>1,277</b>	<b>661</b>	<b>659</b>	<b>657</b>	<b>657</b>	<b>658</b>	<b>658</b>
<b>Total Activity</b>														
Direct	3,972	4,511	4,549	5,052	5,373	5,875	6,201	6,652	6,710	7,116	7,545	7,976	8,408	8,839
Indirect	5,236	5,713	5,807	6,265	6,549	6,975	7,254	7,731	7,814	8,118	8,441	8,764	9,088	9,411
Induced	7,441	8,046	8,209	8,800	9,148	9,654	10,011	10,509	10,629	10,972	11,337	11,702	12,067	12,432
<b>Total</b>	<b>16,649</b>	<b>18,270</b>	<b>18,565</b>	<b>20,118</b>	<b>21,070</b>	<b>22,504</b>	<b>23,467</b>	<b>24,892</b>	<b>25,152</b>	<b>26,207</b>	<b>27,323</b>	<b>28,443</b>	<b>29,562</b>	<b>30,682</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

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<b>Labor Income Contribution by Type due to the Unconventional Activity Value Chain: West Census Region*</b>														
<b>(2012 \$M)</b>														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>Upstream Energy Activity</b>														
Direct	6,068	6,627	7,187	7,746	7,820	7,893	7,966	8,039	8,112	8,285	8,458	8,631	8,804	8,977
Indirect	6,017	7,060	8,103	9,146	9,368	9,591	9,814	10,036	10,259	10,584	10,909	11,234	11,559	11,884
Induced	7,048	8,514	9,981	11,447	11,753	12,058	12,364	12,670	12,976	13,364	13,752	14,140	14,528	14,916
<b>Total</b>	<b>19,133</b>	<b>22,202</b>	<b>25,271</b>	<b>28,339</b>	<b>28,941</b>	<b>29,542</b>	<b>30,144</b>	<b>30,745</b>	<b>31,347</b>	<b>32,233</b>	<b>33,119</b>	<b>34,005</b>	<b>34,891</b>	<b>35,777</b>
<b>Midstream and Downstream Energy Activity</b>														
Direct	385	543	485	640	383	225	244	177	81	105	184	229	228	87
Indirect	286	406	365	477	298	179	186	135	60	79	140	175	174	65
Induced	323	460	414	542	328	195	215	156	70	92	164	205	204	77
<b>Total</b>	<b>995</b>	<b>1,410</b>	<b>1,265</b>	<b>1,659</b>	<b>1,009</b>	<b>599</b>	<b>645</b>	<b>468</b>	<b>211</b>	<b>276</b>	<b>487</b>	<b>609</b>	<b>607</b>	<b>229</b>
<b>Energy-Related Chemicals Activity</b>														
Direct	36	12	9	33	148	168	167	32	32	32	31	31	31	31
Indirect	41	22	20	38	130	147	208	99	99	98	98	98	98	98
Induced	33	14	12	31	126	146	171	56	57	57	57	57	57	57
<b>Total</b>	<b>110</b>	<b>49</b>	<b>41</b>	<b>102</b>	<b>404</b>	<b>460</b>	<b>546</b>	<b>187</b>	<b>188</b>	<b>187</b>	<b>186</b>	<b>186</b>	<b>187</b>	<b>187</b>
<b>Total Activity</b>														
Direct	6,489	7,183	7,682	8,419	8,351	8,286	8,376	8,248	8,225	8,422	8,673	8,891	9,064	9,095
Indirect	6,344	7,489	8,488	9,661	9,796	9,917	10,208	10,270	10,418	10,761	11,146	11,507	11,831	12,047
Induced	7,405	8,989	10,406	12,020	12,207	12,399	12,750	12,883	13,103	13,513	13,973	14,402	14,789	15,050
<b>Total</b>	<b>20,238</b>	<b>23,661</b>	<b>26,576</b>	<b>30,101</b>	<b>30,354</b>	<b>30,601</b>	<b>31,334</b>	<b>31,401</b>	<b>31,745</b>	<b>32,696</b>	<b>33,792</b>	<b>34,800</b>	<b>35,684</b>	<b>36,193</b>

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

Source: IHS Economics

**Government Revenue**

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US Government Revenue due to the Unconventional Activity Value Chain: Base Case*															
(2012 \$M)															
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2012-2025
<b>Upstream Energy Activity**</b>															
Federal Taxes	28,903	33,312	37,722	42,132	43,739	45,346	46,953	48,560	50,167	51,258	52,348	53,439	54,530	55,620	644,028
Federal Royalty Payments	1,964	2,189	2,414	2,639	2,752	2,865	2,978	3,091	3,204	3,162	3,120	3,078	3,036	2,994	39,487
Federal Bonus Payments	148	155	161	167	164	160	157	153	150	147	145	143	140	138	2,127
State and Local Taxes	22,610	26,261	29,912	33,563	34,849	36,136	37,423	38,709	39,996	40,820	41,643	42,467	43,291	44,114	511,794
Severance Taxes	5,450	6,519	7,588	8,657	9,279	9,902	10,524	11,147	11,769	12,062	12,354	12,647	12,939	13,232	144,071
Ad Valorem Taxes	2,795	3,280	3,766	4,251	4,566	4,881	5,195	5,510	5,825	5,928	6,030	6,133	6,235	6,338	70,732
State Royalty Payments	715	827	939	1,050	1,112	1,174	1,235	1,297	1,359	1,375	1,392	1,409	1,426	1,443	16,753
State Bonus Payments	430	453	476	499	493	488	483	478	472	469	466	463	460	457	6,587
<b>Total Government Revenue</b>	<b>63,015</b>	<b>72,996</b>	<b>82,976</b>	<b>92,957</b>	<b>96,954</b>	<b>100,951</b>	<b>104,949</b>	<b>108,946</b>	<b>112,943</b>	<b>115,222</b>	<b>117,500</b>	<b>119,778</b>	<b>122,057</b>	<b>124,335</b>	<b>1,435,579</b>
Lease Payments to Private Landowners	504	573	642	711	751	792	832	873	913	950	986	1,023	1,059	1,096	11,705
<b>Midstream and Downstream Energy Activity</b>															
Federal Taxes	5,712	5,163	4,615	4,066	3,512	2,958	2,404	1,850	1,297	1,237	1,176	1,116	1,056	996	37,159
State and Local Taxes	4,038	3,615	3,193	2,771	2,391	2,011	1,631	1,251	871	831	790	750	710	669	25,522
<b>Total Government Revenue</b>	<b>9,750</b>	<b>8,779</b>	<b>7,808</b>	<b>6,837</b>	<b>5,903</b>	<b>4,969</b>	<b>4,035</b>	<b>3,102</b>	<b>2,168</b>	<b>2,067</b>	<b>1,967</b>	<b>1,866</b>	<b>1,766</b>	<b>1,665</b>	<b>62,682</b>
<b>Energy-Related Chemicals Activity</b>															
Federal Taxes	983	1,598	2,214	2,829	3,511	4,193	4,875	5,557	6,238	6,474	6,709	6,944	7,179	7,414	66,716
State and Local Taxes	695	1,106	1,517	1,928	2,381	2,833	3,286	3,738	4,191	4,349	4,507	4,665	4,823	4,981	44,997
<b>Total Government Revenue</b>	<b>1,677</b>	<b>2,704</b>	<b>3,730</b>	<b>4,757</b>	<b>5,891</b>	<b>7,026</b>	<b>8,160</b>	<b>9,295</b>	<b>10,429</b>	<b>10,822</b>	<b>11,215</b>	<b>11,608</b>	<b>12,001</b>	<b>12,395</b>	<b>111,713</b>
<b>Total Activity</b>															
Federal Taxes	35,598	40,074	44,550	49,026	50,761	52,497	54,232	55,967	57,702	58,968	60,233	61,499	62,765	64,030	747,903
Federal Royalty Payments	1,964	2,189	2,414	2,639	2,752	2,865	2,978	3,091	3,204	3,162	3,120	3,078	3,036	2,994	39,487
Federal Bonus Payments	148	155	161	167	164	160	157	153	150	147	145	143	140	138	2,127
State and Local Taxes	27,342	30,982	34,622	38,262	39,621	40,980	42,340	43,699	45,058	45,999	46,940	47,882	48,823	49,764	582,314
Severance Taxes	5,450	6,519	7,588	8,657	9,279	9,902	10,524	11,147	11,769	12,062	12,354	12,647	12,939	13,232	144,071
Ad Valorem Taxes	2,795	3,280	3,766	4,251	4,566	4,881	5,195	5,510	5,825	5,928	6,030	6,133	6,235	6,338	70,732
State Royalty Payments	715	827	939	1,050	1,112	1,174	1,235	1,297	1,359	1,375	1,392	1,409	1,426	1,443	16,753
State Bonus Payments	430	453	476	499	493	488	483	478	472	469	466	463	460	457	6,587
<b>Total Government Revenue</b>	<b>74,443</b>	<b>84,479</b>	<b>94,515</b>	<b>104,551</b>	<b>108,749</b>	<b>112,947</b>	<b>117,144</b>	<b>121,342</b>	<b>125,540</b>	<b>128,111</b>	<b>130,682</b>	<b>133,253</b>	<b>135,824</b>	<b>138,395</b>	<b>1,609,974</b>
Lease Payments to Private Landowners	504	573	642	711	751	792	832	873	913	950	986	1,023	1,059	1,096	11,705

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

\*\*Federal royalty payments, federal bonus payments, and lease payments to private landowners only apply to upstream energy activity where land is leased from private households for drilling.

Source: IHS Economics

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South Census Region Government Revenue due to the Unconventional Activity Value Chain: Base Case*															
(2012 \$M)															
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2012-2025
<b>Upstream Energy Activity**</b>															
Federal Taxes	18,592	21,184	23,775	26,366	27,209	28,053	28,896	29,739	30,583	30,775	30,968	31,161	31,354	31,547	390,203
Federal Royalty Payments	53	69	86	96	96	104	113	124	137	145	156	163	170	178	1,691
Federal Bonus Payments	27	9	17	30	27	27	27	27	31	27	27	27	27	29	358
State and Local Taxes	8,609	10,132	11,654	13,177	13,670	14,164	14,657	15,150	15,644	15,976	16,308	16,640	16,972	17,304	200,055
Severance Taxes	3,142	3,956	4,768	5,471	5,778	6,210	6,667	7,125	7,602	7,875	8,172	8,419	8,637	8,862	92,685
Ad Valorem Taxes	989	1,217	1,435	1,627	1,726	1,852	1,976	2,101	2,228	2,276	2,327	2,360	2,383	2,408	26,906
State Royalty Payments	236	295	349	387	393	417	444	469	496	506	519	529	539	554	6,134
State Bonus Payments	85	90	94	105	108	111	112	114	115	117	118	118	117	120	1,523
<b>Total Government Revenue</b>	<b>31,734</b>	<b>36,951</b>	<b>42,178</b>	<b>47,259</b>	<b>49,008</b>	<b>50,937</b>	<b>52,892</b>	<b>54,850</b>	<b>56,835</b>	<b>57,697</b>	<b>58,595</b>	<b>59,417</b>	<b>60,200</b>	<b>61,001</b>	<b>719,554</b>
Lease Payments to Private Landowners	317	356	395	440	469	499	527	559	590	619	646	668	685	705	7,476
<b>Midstream and Downstream Energy Activity</b>															
Federal Taxes	3,917	3,615	3,490	2,979	2,615	2,497	1,933	1,469	1,062	1,049	946	887	839	828	28,125
State and Local Taxes	2,796	2,542	2,409	2,019	1,771	1,695	1,316	998	715	706	638	598	566	558	19,324
<b>Total Government Revenue</b>	<b>6,712</b>	<b>6,156</b>	<b>5,899</b>	<b>4,998</b>	<b>4,385</b>	<b>4,192</b>	<b>3,249</b>	<b>2,467</b>	<b>1,777</b>	<b>1,755</b>	<b>1,584</b>	<b>1,485</b>	<b>1,405</b>	<b>1,385</b>	<b>47,449</b>
<b>Energy-Related Chemicals Activity</b>															
Federal Taxes	941	1,543	2,054	2,578	3,060	3,669	4,288	4,958	5,774	6,005	6,241	6,451	6,618	6,819	60,997
State and Local Taxes	667	1,070	1,414	1,768	2,094	2,509	2,924	3,363	3,893	4,052	4,213	4,355	4,475	4,613	41,411
<b>Total Government Revenue</b>	<b>1,608</b>	<b>2,613</b>	<b>3,468</b>	<b>4,346</b>	<b>5,154</b>	<b>6,178</b>	<b>7,212</b>	<b>8,321</b>	<b>9,667</b>	<b>10,057</b>	<b>10,454</b>	<b>10,806</b>	<b>11,093</b>	<b>11,432</b>	<b>102,408</b>
<b>Total Activity</b>															
Federal Taxes	23,450	26,341	29,319	31,923	32,884	34,218	35,117	36,167	37,418	37,830	38,156	38,499	38,811	39,194	479,325
Federal Royalty Payments	53	69	86	96	96	104	113	124	137	145	156	163	170	178	1,691
Federal Bonus Payments	27	9	17	30	27	27	27	27	31	27	27	27	27	29	358
State and Local Taxes	12,071	13,743	15,477	16,964	17,535	18,368	18,896	19,511	20,252	20,734	21,158	21,593	22,012	22,474	260,790
Severance Taxes	3,142	3,956	4,768	5,471	5,778	6,210	6,667	7,125	7,602	7,875	8,172	8,419	8,637	8,862	92,685
Ad Valorem Taxes	989	1,217	1,435	1,627	1,726	1,852	1,976	2,101	2,228	2,276	2,327	2,360	2,383	2,408	26,906
State Royalty Payments	236	295	349	387	393	417	444	469	496	506	519	529	539	554	6,134
State Bonus Payments	85	90	94	105	108	111	112	114	115	117	118	118	117	120	1,523
<b>Total Government Revenue</b>	<b>40,054</b>	<b>45,720</b>	<b>51,546</b>	<b>56,603</b>	<b>58,547</b>	<b>61,306</b>	<b>63,353</b>	<b>65,638</b>	<b>68,279</b>	<b>69,509</b>	<b>70,633</b>	<b>71,708</b>	<b>72,697</b>	<b>73,818</b>	<b>869,411</b>
Lease Payments to Private Landowners	317	356	395	440	469	499	527	559	590	619	646	668	685	705	7,476

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

\*\*Federal royalty payments, federal bonus payments, and lease payments to private landowners only apply to upstream energy activity where land is leased from private households for drilling.

Source: IHS Economics

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<b>Midwest Census Region Government Revenue due to the Unconventional Activity Value Chain: Base Case*</b>															
(2012 \$M)															
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2012-2025
<b>Upstream Energy Activity**</b>															
Federal Taxes	5,133	6,212	7,291	8,370	8,876	9,383	9,890	10,396	10,903	11,299	11,696	12,092	12,488	12,885	136,911
Federal Royalty Payments	908	1,030	1,136	1,277	1,404	1,484	1,547	1,629	1,719	1,735	1,753	1,770	1,781	1,782	20,955
Federal Bonus Payments	74	26	54	90	74	74	74	74	83	74	74	74	74	73	988
State and Local Taxes	3,418	4,024	4,631	5,238	5,699	6,160	6,621	7,082	7,543	7,934	8,325	8,717	9,108	9,499	93,998
Severance Taxes	1,411	1,566	1,712	1,968	2,235	2,373	2,478	2,598	2,713	2,752	2,769	2,807	2,853	2,875	33,109
Ad Valorem Taxes	934	1,039	1,142	1,310	1,490	1,596	1,679	1,771	1,861	1,884	1,897	1,923	1,954	1,973	22,456
State Royalty Payments	359	402	446	507	563	596	625	655	684	691	694	702	709	711	8,343
State Bonus Payments	226	247	268	276	270	265	261	258	255	253	248	242	236	225	3,528
<b>Total Government Revenue</b>	<b>12,461</b>	<b>14,546</b>	<b>16,679</b>	<b>19,036</b>	<b>20,611</b>	<b>21,930</b>	<b>23,175</b>	<b>24,462</b>	<b>25,760</b>	<b>26,622</b>	<b>27,455</b>	<b>28,325</b>	<b>29,203</b>	<b>30,023</b>	<b>320,289</b>
Lease Payments to Private Landowners	88	109	131	148	158	167	174	182	190	197	204	212	222	228	2,411
<b>Midstream and Downstream Energy Activity</b>															
Federal Taxes	604	633	610	544	351	129	173	167	127	98	92	77	70	85	3,760
State and Local Taxes	425	444	427	374	240	86	117	112	85	65	61	51	47	57	2,589
<b>Total Government Revenue</b>	<b>1,029</b>	<b>1,077</b>	<b>1,037</b>	<b>917</b>	<b>591</b>	<b>215</b>	<b>290</b>	<b>279</b>	<b>212</b>	<b>164</b>	<b>152</b>	<b>128</b>	<b>117</b>	<b>142</b>	<b>6,349</b>
<b>Energy-Related Chemicals Activity</b>															
Federal Taxes	14	38	146	224	336	296	288	214	227	229	229	250	329	357	3,177
State and Local Taxes	9	25	95	143	216	189	185	140	147	147	145	159	203	219	2,023
<b>Total Government Revenue</b>	<b>23</b>	<b>64</b>	<b>241</b>	<b>367</b>	<b>552</b>	<b>485</b>	<b>473</b>	<b>354</b>	<b>374</b>	<b>376</b>	<b>374</b>	<b>409</b>	<b>532</b>	<b>575</b>	<b>5,200</b>
<b>Total Activity</b>															
Federal Taxes	5,750	6,883	8,047	9,137	9,564	9,808	10,351	10,777	11,257	11,626	12,016	12,419	12,887	13,326	143,849
Federal Royalty Payments	908	1,030	1,136	1,277	1,404	1,484	1,547	1,629	1,719	1,735	1,753	1,770	1,781	1,782	20,955
Federal Bonus Payments	74	26	54	90	74	74	74	74	83	74	74	74	74	73	988
State and Local Taxes	3,852	4,494	5,153	5,755	6,154	6,434	6,922	7,335	7,775	8,146	8,532	8,926	9,358	9,775	98,610
Severance Taxes	1,411	1,566	1,712	1,968	2,235	2,373	2,478	2,598	2,713	2,752	2,769	2,807	2,853	2,875	33,109
Ad Valorem Taxes	934	1,039	1,142	1,310	1,490	1,596	1,679	1,771	1,861	1,884	1,897	1,923	1,954	1,973	22,456
State Royalty Payments	359	402	446	507	563	596	625	655	684	691	694	702	709	711	8,343
State Bonus Payments	226	247	268	276	270	265	261	258	255	253	248	242	236	225	3,528
<b>Total Government Revenue</b>	<b>13,513</b>	<b>15,687</b>	<b>17,957</b>	<b>20,321</b>	<b>21,754</b>	<b>22,630</b>	<b>23,937</b>	<b>25,095</b>	<b>26,347</b>	<b>27,161</b>	<b>27,982</b>	<b>28,862</b>	<b>29,852</b>	<b>30,741</b>	<b>331,839</b>
Lease Payments to Private Landowners	88	109	131	148	158	167	174	182	190	197	204	212	222	228	2,411

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

\*\*Federal royalty payments, federal bonus payments, and lease payments to private landowners only apply to upstream energy activity where land is leased from private households for drilling.

Source: IHS Economics

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Northeast Census Region Government Revenue due to the Unconventional Activity Value Chain: Base Case*															
(2012 \$M)															
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2012-2025
<b>Upstream Energy Activity**</b>															
Federal Taxes	1,807	2,081	2,356	2,630	2,723	2,817	2,910	3,003	3,096	3,170	3,243	3,317	3,390	3,463	40,006
Federal Royalty Payments	7	12	16	19	19	20	23	25	28	30	33	35	37	40	345
Federal Bonus Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
State and Local Taxes	3,736	4,574	5,412	6,251	6,520	6,789	7,058	7,327	7,596	7,815	8,034	8,252	8,471	8,690	96,526
Severance Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ad Valorem Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
State Royalty Payments	13	21	29	34	34	37	41	45	50	54	58	62	66	71	616
State Bonus Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Government Revenue</b>	<b>5,563</b>	<b>6,688</b>	<b>7,813</b>	<b>8,934</b>	<b>9,296</b>	<b>9,663</b>	<b>10,032</b>	<b>10,401</b>	<b>10,771</b>	<b>11,069</b>	<b>11,368</b>	<b>11,666</b>	<b>11,965</b>	<b>12,265</b>	<b>137,493</b>
Lease Payments to Private Landowners	32	35	39	43	46	48	52	56	60	64	67	69	73	78	761
<b>Midstream and Downstream Energy Activity</b>															
Federal Taxes	926	617	228	104	132	118	89	71	51	27	25	21	19	22	2,450
State and Local Taxes	631	419	155	71	92	83	60	46	34	18	17	14	13	15	1,670
<b>Total Government Revenue</b>	<b>1,557</b>	<b>1,036</b>	<b>383</b>	<b>175</b>	<b>225</b>	<b>200</b>	<b>150</b>	<b>118</b>	<b>85</b>	<b>45</b>	<b>42</b>	<b>36</b>	<b>32</b>	<b>36</b>	<b>4,120</b>
<b>Energy-Related Chemicals Activity</b>															
Federal Taxes	-	-	-	-	23	131	171	337	187	189	189	191	183	188	1,789
State and Local Taxes	-	-	-	-	14	77	99	204	118	117	116	118	113	116	1,092
<b>Total Government Revenue</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>38</b>	<b>208</b>	<b>269</b>	<b>541</b>	<b>305</b>	<b>306</b>	<b>305</b>	<b>309</b>	<b>296</b>	<b>304</b>	<b>2,882</b>
<b>Total Activity</b>															
Federal Taxes	2,733	2,698	2,583	2,734	2,879	3,065	3,170	3,412	3,335	3,386	3,457	3,529	3,592	3,673	44,246
Federal Royalty Payments	7	12	16	19	19	20	23	25	28	30	33	35	37	40	345
Federal Bonus Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
State and Local Taxes	4,368	4,993	5,567	6,322	6,627	6,949	7,217	7,577	7,748	7,950	8,167	8,385	8,597	8,821	99,288
Severance Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ad Valorem Taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
State Royalty Payments	13	21	29	34	34	37	41	45	50	54	58	62	66	71	616
State Bonus Payments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Government Revenue</b>	<b>7,121</b>	<b>7,723</b>	<b>8,196</b>	<b>9,109</b>	<b>9,558</b>	<b>10,071</b>	<b>10,451</b>	<b>11,060</b>	<b>11,162</b>	<b>11,420</b>	<b>11,715</b>	<b>12,011</b>	<b>12,293</b>	<b>12,605</b>	<b>144,494</b>
Lease Payments to Private Landowners	32	35	39	43	46	48	52	56	60	64	67	69	73	78	761

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

\*\*Federal royalty payments, federal bonus payments, and lease payments to private landowners only apply to upstream energy activity where land is leased from private households for drilling.

Source: IHS Economics

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West Census Region Government Revenue due to the Unconventional Activity Value Chain: Base Case*															
(2012 \$M)															
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2012-2025
<b>Upstream Energy Activity**</b>															
Federal Taxes	3,371	3,836	4,301	4,766	4,930	5,094	5,258	5,421	5,585	6,013	6,441	6,869	7,297	7,725	76,907
Federal Royalty Payments	996	1,078	1,176	1,247	1,232	1,257	1,295	1,313	1,320	1,252	1,178	1,110	1,048	995	16,497
Federal Bonus Payments	48	15	28	47	48	48	48	48	36	48	48	48	48	35	591
State and Local Taxes	6,847	7,530	8,214	8,897	8,960	9,024	9,087	9,150	9,213	9,095	8,977	8,858	8,740	8,622	121,215
Severance Taxes	897	997	1,108	1,218	1,267	1,319	1,379	1,424	1,455	1,435	1,414	1,421	1,449	1,494	18,276
Ad Valorem Taxes	510	580	656	723	750	789	837	871	895	879	864	868	885	917	11,026
State Royalty Payments	107	109	115	122	122	124	126	127	128	125	121	116	111	106	1,659
State Bonus Payments	119	116	114	118	115	113	110	106	103	100	100	103	106	112	1,536
<b>Total Government Revenue</b>	<b>12,895</b>	<b>14,263</b>	<b>15,712</b>	<b>17,137</b>	<b>17,424</b>	<b>17,767</b>	<b>18,139</b>	<b>18,461</b>	<b>18,736</b>	<b>18,946</b>	<b>19,143</b>	<b>19,394</b>	<b>19,685</b>	<b>20,006</b>	<b>247,708</b>
Lease Payments to Private Landowners	67	72	77	80	79	78	79	76	73	69	69	73	79	85	1,057
<b>Midstream and Downstream Energy Activity</b>															
Federal Taxes	266	299	287	440	414	215	209	143	56	63	113	131	128	61	2,824
State and Local Taxes	186	211	203	307	289	147	139	95	37	41	74	86	84	40	1,939
<b>Total Government Revenue</b>	<b>452</b>	<b>509</b>	<b>489</b>	<b>747</b>	<b>702</b>	<b>362</b>	<b>347</b>	<b>238</b>	<b>93</b>	<b>104</b>	<b>188</b>	<b>218</b>	<b>212</b>	<b>102</b>	<b>4,763</b>
<b>Energy-Related Chemicals Activity</b>															
Federal Taxes	28	17	14	27	91	97	128	47	50	51	51	51	49	51	752
State and Local Taxes	18	10	8	16	56	58	79	31	33	33	32	33	32	32	472
<b>Total Government Revenue</b>	<b>47</b>	<b>28</b>	<b>21</b>	<b>43</b>	<b>147</b>	<b>155</b>	<b>206</b>	<b>79</b>	<b>83</b>	<b>83</b>	<b>83</b>	<b>84</b>	<b>81</b>	<b>83</b>	<b>1,223</b>
<b>Total Activity</b>															
Federal Taxes	3,665	4,152	4,601	5,232	5,435	5,406	5,594	5,611	5,692	6,126	6,605	7,052	7,474	7,837	80,483
Federal Royalty Payments	996	1,078	1,176	1,247	1,232	1,257	1,295	1,313	1,320	1,252	1,178	1,110	1,048	995	16,497
Federal Bonus Payments	48	15	28	47	48	48	48	48	36	48	48	48	48	35	591
State and Local Taxes	7,051	7,752	8,424	9,221	9,305	9,229	9,304	9,276	9,283	9,169	9,083	8,978	8,856	8,694	123,625
Severance Taxes	897	997	1,108	1,218	1,267	1,319	1,379	1,424	1,455	1,435	1,414	1,421	1,449	1,494	18,276
Ad Valorem Taxes	510	580	656	723	750	789	837	871	895	879	864	868	885	917	11,026
State Royalty Payments	107	109	115	122	122	124	126	127	128	125	121	116	111	106	1,659
State Bonus Payments	119	116	114	118	115	113	110	106	103	100	100	103	106	112	1,536
<b>Total Government Revenue</b>	<b>13,393</b>	<b>14,800</b>	<b>16,222</b>	<b>17,927</b>	<b>18,274</b>	<b>18,285</b>	<b>18,692</b>	<b>18,777</b>	<b>18,913</b>	<b>19,133</b>	<b>19,413</b>	<b>19,696</b>	<b>19,978</b>	<b>20,191</b>	<b>253,694</b>
Lease Payments to Private Landowners	67	72	77	80	79	78	79	76	73	69	69	73	79	85	1,057

NOTES: Numbers may not sum due to rounding.

\*The unconventional activity value chain represents the sum of upstream energy, midstream and downstream energy, and energy-related chemicals activity.

\*\*Federal royalty payments, federal bonus payments, and lease payments to private landowners only apply to upstream energy activity where land is leased from private households for drilling.

Source: IHS Economics