

**Table A15. Gross output by region and sector, Low Economic Growth case**

billion 2015 dollars

Region and sector	2020	2025	2030	2035	2040	2045
<b>OECD</b>						
<b>United States</b>						
Energy-intensive manufacturing	\$2,575	\$2,841	\$2,993	\$3,174	\$3,337	\$3,522
Non-energy-intensive manufacturing	\$3,666	\$4,320	\$4,651	\$5,107	\$5,565	\$6,097
Nonmanufacturing	\$2,456	\$2,760	\$2,968	\$3,219	\$3,451	\$3,709
Services	\$25,509	\$29,042	\$31,070	\$33,654	\$36,145	\$38,886
<b>Total</b>	<b>\$34,206</b>	<b>\$38,964</b>	<b>\$41,682</b>	<b>\$45,153</b>	<b>\$48,498</b>	<b>\$52,214</b>
<b>Canada</b>						
Energy-intensive manufacturing	\$245	\$290	\$313	\$338	\$362	\$387
Non-energy-intensive manufacturing	\$311	\$385	\$409	\$436	\$463	\$492
Nonmanufacturing	\$458	\$512	\$550	\$589	\$621	\$650
Services	\$1,577	\$1,933	\$2,041	\$2,155	\$2,278	\$2,403
<b>Total</b>	<b>\$2,590</b>	<b>\$3,120</b>	<b>\$3,314</b>	<b>\$3,518</b>	<b>\$3,724</b>	<b>\$3,932</b>
<b>Mexico and other OECD Americas</b>						
Energy-intensive manufacturing	\$811	\$912	\$981	\$1,054	\$1,124	\$1,195
Non-energy-intensive manufacturing	\$926	\$1,128	\$1,209	\$1,300	\$1,404	\$1,524
Nonmanufacturing	\$755	\$863	\$939	\$1,019	\$1,096	\$1,158
Services	\$2,888	\$3,472	\$3,791	\$4,125	\$4,460	\$4,768
<b>Total</b>	<b>\$5,380</b>	<b>\$6,375</b>	<b>\$6,920</b>	<b>\$7,498</b>	<b>\$8,084</b>	<b>\$8,645</b>
<b>OECD Europe</b>						
Energy-intensive manufacturing	\$4,488	\$4,907	\$5,034	\$5,157	\$5,269	\$5,377
Non-energy-intensive manufacturing	\$7,156	\$8,462	\$8,841	\$9,273	\$9,725	\$10,204
Nonmanufacturing	\$4,159	\$4,678	\$4,845	\$4,963	\$5,065	\$5,152
Services	\$27,308	\$30,766	\$32,111	\$33,287	\$34,529	\$35,826
<b>Total</b>	<b>\$43,111</b>	<b>\$48,813</b>	<b>\$50,831</b>	<b>\$52,680</b>	<b>\$54,588</b>	<b>\$56,559</b>
<b>Japan</b>						
Energy-intensive manufacturing	\$1,013	\$1,082	\$1,044	\$989	\$936	\$888
Non-energy-intensive manufacturing	\$2,584	\$3,040	\$3,054	\$3,015	\$2,972	\$2,929
Nonmanufacturing	\$630	\$661	\$638	\$611	\$586	\$561
Services	\$5,566	\$5,853	\$5,866	\$5,758	\$5,648	\$5,545
<b>Total</b>	<b>\$9,793</b>	<b>\$10,637</b>	<b>\$10,603</b>	<b>\$10,373</b>	<b>\$10,143</b>	<b>\$9,923</b>
<b>South Korea</b>						
Energy-intensive manufacturing	\$1,084	\$1,183	\$1,230	\$1,244	\$1,242	\$1,240
Non-energy-intensive manufacturing	\$1,508	\$1,787	\$1,911	\$1,958	\$1,970	\$1,987
Nonmanufacturing	\$372	\$415	\$439	\$456	\$465	\$473
Services	\$2,345	\$2,587	\$2,729	\$2,769	\$2,768	\$2,772
<b>Total</b>	<b>\$5,309</b>	<b>\$5,972</b>	<b>\$6,309</b>	<b>\$6,427</b>	<b>\$6,445</b>	<b>\$6,472</b>
<b>Australia and New Zealand</b>						
Energy-intensive manufacturing	\$175	\$179	\$186	\$193	\$199	\$203

Non-energy-intensive manufacturing	\$123	\$129	\$135	\$142	\$148	\$152
Nonmanufacturing	\$527	\$622	\$680	\$744	\$793	\$834
Services	\$1,801	\$2,023	\$2,235	\$2,437	\$2,620	\$2,788
<b>Total</b>	<b>\$2,626</b>	<b>\$2,953</b>	<b>\$3,236</b>	<b>\$3,515</b>	<b>\$3,759</b>	<b>\$3,978</b>
<b>Total OECD</b>						
Energy-intensive manufacturing	\$10,390	\$11,394	\$11,781	\$12,150	\$12,469	\$12,813
Non-energy-intensive manufacturing	\$16,274	\$19,252	\$20,211	\$21,232	\$22,247	\$23,385
Nonmanufacturing	\$9,358	\$10,512	\$11,061	\$11,600	\$12,077	\$12,538
Services	\$66,994	\$75,677	\$79,843	\$84,184	\$88,449	\$92,988
<b>Total</b>	<b>\$103,015</b>	<b>\$116,834</b>	<b>\$122,895</b>	<b>\$129,165</b>	<b>\$135,241</b>	<b>\$141,723</b>
<b>Non-OECD</b>						
<b>Russia</b>						
Energy-intensive manufacturing	\$721	\$802	\$821	\$840	\$848	\$844
Non-energy-intensive manufacturing	\$578	\$666	\$665	\$678	\$687	\$689
Nonmanufacturing	\$1,192	\$1,333	\$1,339	\$1,332	\$1,303	\$1,267
Services	\$3,553	\$3,877	\$3,650	\$3,499	\$3,258	\$2,969
<b>Total</b>	<b>\$6,044</b>	<b>\$6,677</b>	<b>\$6,476</b>	<b>\$6,349</b>	<b>\$6,096</b>	<b>\$5,768</b>
<b>Other Europe and Eurasia</b>						
Energy-intensive manufacturing	\$584	\$638	\$664	\$710	\$755	\$793
Non-energy-intensive manufacturing	\$460	\$526	\$547	\$577	\$607	\$633
Nonmanufacturing	\$996	\$1,094	\$1,158	\$1,213	\$1,254	\$1,284
Services	\$2,672	\$3,116	\$3,306	\$3,508	\$3,660	\$3,761
<b>Total</b>	<b>\$4,712</b>	<b>\$5,375</b>	<b>\$5,675</b>	<b>\$6,008</b>	<b>\$6,276</b>	<b>\$6,471</b>
<b>China</b>						
Energy-intensive manufacturing	\$13,218	\$15,321	\$16,191	\$16,534	\$16,498	\$16,273
Non-energy-intensive manufacturing	\$23,190	\$28,626	\$31,883	\$34,543	\$36,144	\$37,104
Nonmanufacturing	\$10,745	\$12,545	\$13,572	\$14,267	\$14,642	\$14,823
Services	\$29,694	\$39,681	\$48,239	\$56,413	\$63,929	\$71,177
<b>Total</b>	<b>\$76,846</b>	<b>\$96,174</b>	<b>\$109,885</b>	<b>\$121,757</b>	<b>\$131,214</b>	<b>\$139,376</b>
<b>India</b>						
Energy-intensive manufacturing	\$3,311	\$4,527	\$6,098	\$7,679	\$9,126	\$10,494
Non-energy-intensive manufacturing	\$2,526	\$3,816	\$5,225	\$6,640	\$8,041	\$9,454
Nonmanufacturing	\$3,750	\$5,151	\$6,503	\$7,796	\$9,030	\$10,187
Services	\$6,692	\$9,379	\$12,847	\$16,397	\$19,845	\$23,316
<b>Total</b>	<b>\$16,278</b>	<b>\$22,874</b>	<b>\$30,673</b>	<b>\$38,513</b>	<b>\$46,042</b>	<b>\$53,452</b>
<b>Other Asia</b>						
Energy-intensive manufacturing	\$3,226	\$3,867	\$4,445	\$5,101	\$5,784	\$6,469
Non-energy-intensive manufacturing	\$6,062	\$7,382	\$8,408	\$9,340	\$10,196	\$10,937
Nonmanufacturing	\$4,109	\$4,982	\$5,875	\$6,774	\$7,722	\$8,662
Services	\$11,758	\$14,333	\$16,829	\$19,139	\$21,389	\$23,542
<b>Total</b>	<b>\$25,156</b>	<b>\$30,564</b>	<b>\$35,557</b>	<b>\$40,353</b>	<b>\$45,091</b>	<b>\$49,609</b>
<b>Middle East</b>						
Energy-intensive manufacturing	\$1,392	\$1,632	\$1,765	\$1,864	\$1,926	\$1,942
Non-energy-intensive manufacturing	\$383	\$475	\$524	\$553	\$575	\$589
Nonmanufacturing	\$2,435	\$2,744	\$2,939	\$3,108	\$3,284	\$3,467
Services	\$4,545	\$5,269	\$5,814	\$6,257	\$6,644	\$7,028
<b>Total</b>	<b>\$8,755</b>	<b>\$10,120</b>	<b>\$11,041</b>	<b>\$11,782</b>	<b>\$12,429</b>	<b>\$13,026</b>

<b>Africa</b>						
Energy-intensive manufacturing	\$1,256	\$1,412	\$1,604	\$1,815	\$2,033	\$2,251
Non-energy-intensive manufacturing	\$921	\$1,086	\$1,225	\$1,373	\$1,520	\$1,662
Nonmanufacturing	\$3,114	\$3,507	\$3,986	\$4,468	\$4,964	\$5,471
Services	\$6,095	\$6,908	\$7,713	\$8,483	\$9,257	\$9,973
<b>Total</b>	<b>\$11,386</b>	<b>\$12,913</b>	<b>\$14,526</b>	<b>\$16,140</b>	<b>\$17,773</b>	<b>\$19,356</b>
<b>Brazil</b>						
Energy-intensive manufacturing	\$777	\$856	\$900	\$911	\$911	\$910
Non-energy-intensive manufacturing	\$481	\$601	\$632	\$643	\$649	\$658
Nonmanufacturing	\$668	\$748	\$776	\$790	\$818	\$868
Services	\$2,997	\$3,199	\$3,297	\$3,331	\$3,323	\$3,299
<b>Total</b>	<b>\$4,922</b>	<b>\$5,405</b>	<b>\$5,606</b>	<b>\$5,674</b>	<b>\$5,700</b>	<b>\$5,735</b>
<b>Other Non-OECD Americas</b>						
Energy-intensive manufacturing	\$449	\$505	\$566	\$610	\$658	\$712
Non-energy-intensive manufacturing	\$473	\$556	\$621	\$679	\$748	\$833
Nonmanufacturing	\$677	\$788	\$873	\$938	\$1,005	\$1,076
Services	\$2,295	\$2,645	\$2,936	\$3,115	\$3,299	\$3,491
<b>Total</b>	<b>\$3,895</b>	<b>\$4,494</b>	<b>\$4,996</b>	<b>\$5,342</b>	<b>\$5,711</b>	<b>\$6,113</b>
<b>Total Non-OECD</b>						
Energy-intensive manufacturing	\$24,934	\$29,560	\$33,053	\$36,063	\$38,538	\$40,687
Non-energy-intensive manufacturing	\$35,074	\$43,734	\$49,730	\$55,026	\$59,167	\$62,557
Nonmanufacturing	\$27,685	\$32,891	\$37,021	\$40,686	\$44,023	\$47,104
Services	\$70,300	\$88,409	\$104,631	\$120,142	\$134,603	\$148,558
<b>Total</b>	<b>\$157,994</b>	<b>\$194,593</b>	<b>\$224,435</b>	<b>\$251,918</b>	<b>\$276,331</b>	<b>\$298,906</b>
<b>World</b>						
Energy-intensive manufacturing	\$35,323	\$40,954	\$44,834	\$48,213	\$51,006	\$53,500
Non-energy-intensive manufacturing	\$51,348	\$62,986	\$69,940	\$76,257	\$81,414	\$85,942
Nonmanufacturing	\$37,043	\$43,402	\$48,082	\$52,286	\$56,100	\$59,642
Services	\$137,294	\$164,085	\$184,473	\$204,326	\$223,052	\$241,545
<b>Total</b>	<b>\$261,009</b>	<b>\$311,428</b>	<b>\$347,330</b>	<b>\$381,083</b>	<b>\$411,572</b>	<b>\$440,630</b>

Sources: Table by the U.S. Energy Information Administration (EIA), based on Oxford Global Industry Model, (March 2021), [www.eia.doe.gov](http://www.eia.doe.gov); EIA, World Energy Projection System (2021), run lm\_210719.163843; and EIA, *Annual Energy Outlook 2021*, (February 2022) Notes:

\* Totals may not equal sum of components due to independent rounding.

\* *Gross output* is sales or revenue, including final and intermediate goods and services, measured in purchasing power parity (PP)

2050	Average annual percentage change, 2020–2050
\$3,694	1.2
\$6,627	2.0
\$3,956	1.6
\$41,510	1.6
<b>\$55,786</b>	<b>1.6</b>
\$411	1.7
\$519	1.7
\$678	1.3
\$2,526	1.6
<b>\$4,134</b>	<b>1.6</b>
\$1,267	1.5
\$1,663	2.0
\$1,198	1.5
\$5,043	1.9
<b>\$9,171</b>	<b>1.8</b>
\$5,503	0.7
\$10,717	1.4
\$5,233	0.8
\$37,237	1.0
<b>\$58,691</b>	<b>1.0</b>
\$846	-0.6
\$2,894	0.4
\$539	-0.5
\$5,468	-0.1
<b>\$9,746</b>	<b>0.0</b>
\$1,237	0.4
\$1,994	0.9
\$479	0.8
\$2,762	0.5
<b>\$6,472</b>	<b>0.7</b>
\$207	0.6

\$155	0.8
\$865	1.7
\$2,963	1.7
<b>\$4,190</b>	<b>1.6</b>

\$13,166	0.8
\$24,570	1.4
\$12,947	1.1
\$97,508	1.3
<b>\$148,191</b>	<b>1.2</b>

\$827	0.5
\$690	0.6
\$1,224	0.1
\$2,675	-0.9
<b>\$5,416</b>	<b>-0.4</b>

\$828	1.2
\$656	1.2
\$1,309	0.9
\$3,829	1.2
<b>\$6,622</b>	<b>1.1</b>

\$15,831	0.6
\$37,092	1.6
\$14,966	1.1
\$77,206	3.2
<b>\$145,094</b>	<b>2.1</b>

\$11,659	4.3
\$10,817	5.0
\$11,062	3.7
\$26,697	4.7
<b>\$60,235</b>	<b>4.5</b>

\$7,140	2.7
\$11,548	2.2
\$9,556	2.9
\$25,469	2.6
<b>\$53,713</b>	<b>2.6</b>

\$1,929	1.1
\$600	1.5
\$3,642	1.4
\$7,348	1.6
<b>\$13,520</b>	<b>1.5</b>

\$2,477	2.3
\$1,799	2.3
\$5,996	2.2
\$10,663	1.9
<b>\$20,934</b>	<b>2.1</b>

\$910	0.5
\$667	1.1
\$932	1.1
\$3,264	0.3
<b>\$5,773</b>	<b>0.5</b>

\$769	1.8
\$932	2.3
\$1,148	1.8
\$3,683	1.6
<b>\$6,532</b>	<b>1.7</b>

\$42,369	1.8
\$64,801	2.1
\$49,834	2.0
\$160,834	2.8
<b>\$317,838</b>	<b>2.4</b>

\$55,534	1.5
\$89,371	1.9
\$62,782	1.8
\$258,342	2.1
<b>\$466,029</b>	<b>2.0</b>

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