3 Outlook by growth scenario

- In consideration of uncertainties in mid-term forecasts, this report presents high and low economic growth scenarios and provides an energy demand outlook for each scenario, in addition to the baseline.

<Table 3> Economic growth scenarios

(Unit: Trillion won)

Category	Baseline	High-growth scenario	Low-growth scenario
2011p	1,082 (3.6)	1,082 (3.6)	1,082 (3.6)
2012	1,119 (3.5)	1,125 (4.0)	1,114 (3.0)
2013	1,167 (4.2)	1,183 (5.2)	1,150 (3.2)
2014	1,214 (4.1)	1,244 (5.1)	1,185 (3.1)
2015	1,263 (4.0)	1,306 (5.0)	1,221 (3.0)
2016	1,312 (3.9)	1,370 (4.9)	1,256 (2.9)
Annual average growth rate (%) (2011~2016)	3.9	4.8	3.0

Notes: p indicates that the figures are preliminary. Figures in parentheses are annual changes (%).

- Outlook on primary energy demand for each scenario
  - In the case of the high-growth scenario, primary energy demand is forecast to rise at an annual average rate of 3.4%. In the low-growth scenario, it is expected to rise at an annual average rate of 2.3%.
    - In the case of the baseline scenario, primary energy demand in 2016 is expected to be 1.15 times the 2011 level. In the high-growth scenario, it is expected to be 1.18 times the 2011 level, and in the low-growth scenario, it is expected to be 1.12 times the 2011 level.

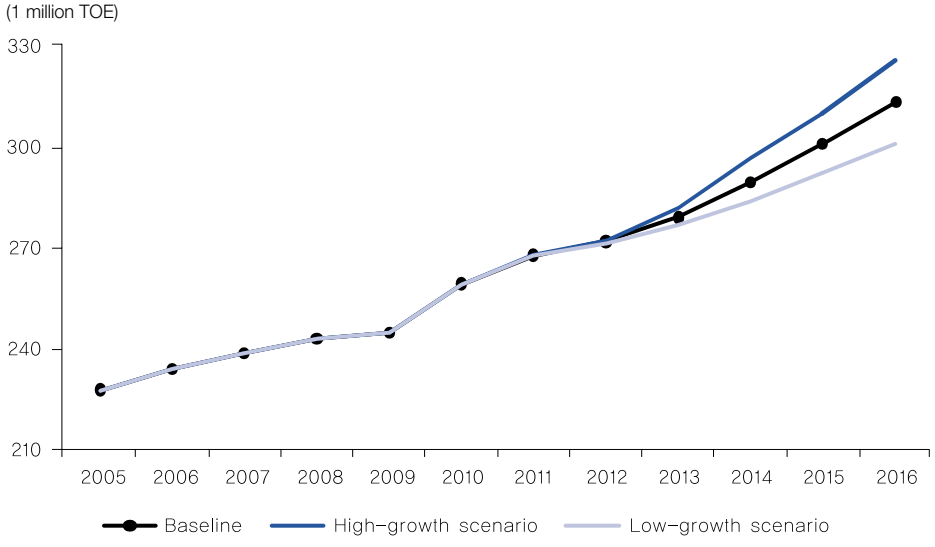
<Table 4> Outlook on primary energy demand by scenario

(Unit: 1 million TOE)

Category	Baseline	High-growth scenario	Low-growth scenario
2011p	271.4 (3.4)	271.4 (3.4)	271.4 (3.4)
2012	274.6 (1.2)	275.1 (1.4)	274.2 (1.0)
2013	284.7 (3.7)	287.0 (4.3)	282.5 (3.0)
2014	293.6 (3.1)	298.0 (3.8)	289.5 (2.5)
2015	302.6 (3.1)	309.4 (3.8)	296.5 (2.4)
2016	311.8 (3.0)	321.2 (3.8)	303.6 (2.4)
Annual average growth rate (%) (2011~2016)	2.8	3.4	2.3

Notes: p indicates that the figures are preliminary. Figures in parentheses are annual changes (%).

[Figure 4] Comparison of primary energy demand outlook among scenarios



• Energy intensity is forecast to improve (fall) at an annual average rate of 1.4% in the case of the high-growth scenario and 0.8% in the case of the low-growth scenario. It is forecast that energy intensity will drop further as the economy grows more rapidly.

<Table 5> Outlook on energy intensity by scenario

(Unit: TOE/1 million won)

Category	Baseline	High-growth scenario	Low-growth scenario
2011p	0.251	0.251	0.251
2012	0.245	0.245	0.246
2013	0.244	0.242	0.246
2014	0.242	0.240	0.244
2015	0.240	0.237	0.243
2016	0.238	0.234	0.242
Annual average improvement rate (%) (2011~2016)	-1.1	-1.4	-0.8

- Outlook on final energy demand by scenario
  - The annual average rate of increase in final energy demand is projected at 3.1% in the high-growth scenario, which is 0.7%p above the baseline. It is forecast at 1.9% in the low-growth scenario, which is 0.5%p below the baseline.

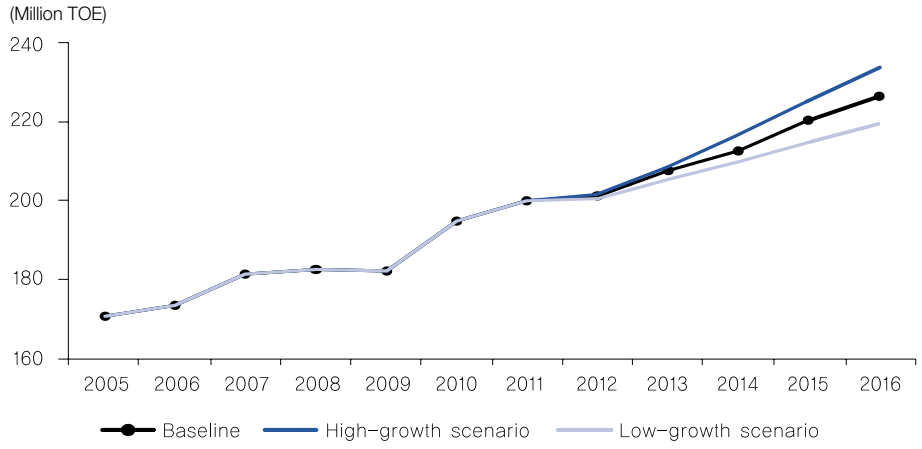
<Table 6> Outlook on final energy demand by scenario

(Unit: 1 million TOE)

Category	Baseline	High-growth scenario	Low-growth scenario
2011p	200.2 (3.3)	200.2 (3.3)	200.2 (3.3)
2012	201.4 (0.6)	202.0 (0.9)	201.0 (0.4)
2013	208.7 (3.6)	210.6 (4.3)	206.9 (3.0)
2014	214.7 (2.9)	218.3 (3.6)	211.5 (2.2)
2015	220.4 (2.6)	225.7 (3.4)	215.7 (2.0)
2016	225.7 (2.4)	232.9 (3.2)	219.5 (1.8)
Annual average increase rate (%) (2011~2016)	2.4	3.1	1.9

Notes: p indicates that the figures are preliminary. Figures in parentheses are annual changes(%).

[Figure 5] Comparison of final energy demand outlook among scenarios



- Outlook on final energy demand by sector per scenario
  - The transport sector indicates the greatest variance among the demand forecasts for the three scenarios. The residential/commercial/public sector shows the least variance.
    - Most of the energy used in the transport sector is from petroleum products. Demand for these products is very elastic with respect to the rate of economic growth and level of international oil prices. This is why the transport sector indicates the greatest difference among the demand forecasts.
    - An essential energy requirement exists in the residential/commercial/public sector, including basic energy demand in the residential sector and the provision of public services such as national defense and administration. This is why demand in this sector is comparatively inelastic with respect to economic growth.
    - There is also a fixed base level of energy demand in the industrial sector unless certain specific economic conditions occur. However, industrial activity is naturally sensitive to business fluctuations, with the result that energy demand by industry depends on the rate of economic growth.