

Gas

Operation Indicator

Category	Name	Policy and method of establishing the indicator	Target	Purpose	Remarks
Basic	Production or Transmission Volume of Gas by Kind of Product	Nm ³ / year Gas heating value (MJ/N m ³) Gas constituents (CH ₄ , C ₃ H ₈ , CO, H ₂ , etc.)	Planned value at the time of appraisal	To confirm how gas production and transmission facilities are operated	<p>This indicator is set assuming that the projects include installation of gas pipeline. Heating value and constituents vary depending on the methods of gas production and kind of product, and are to be described with the value. (Targets of the indicator are gas production facilities: Heating value and constituents are necessary when establishing environment indicators)</p> <p>Many gas projects facilitate conversion from other fossil fuels such as oil and coal to gas due to rising environmental concerns. Accordingly, it is desirable to continuously collect data on demand that is detailed to some degree, as well as data on energy consumption of the other fossil fuels. It is also necessary to collect detailed data on gas constituents because energy supply (heating value) varies depending on the gas constituent.</p>
Basic	Production, Transmission or Supply Interruption Duration (Hours) (According to the cause: human error, machine trouble, natural disaster, and planned outage)	As shown by the name of the indicator	To be discussed with the executing agency	To confirm adequate operation	Regarding gas production and transmission, not only supply interruption duration but also the duration for which the gas pressure is dropped is required to be monitored.

Effect Indicator

Category	Name	Policy and method of establishing the indicator	Target	Purpose	Remarks
Basic	Gas Sales Volume by Type of Beneficiary (for household, industrial, or commercial use)	Nm ³ / Year	Planned value at the time of appraisal	To confirm gas sales volume by type of beneficiary (for household, industrial, or commercial use)	It is assumed that this indicator is adopted for the gas supply project.
Basic	Gas Dissemination Rate (%)	Number of beneficiary households/ total number of households	Number of households planned at the time of appraisal	To assess the level of dissemination of gas service for household use in the target areas	It is assumed that this indicator is adopted for the gas supply project for general households. When it is difficult to follow the continuous increase in the number of households due to urbanization, the numbers of beneficiary households in each year and dissemination rate can be used together.

Environment Indicator

Category	Name	Policy and method of establishing the indicator	Target	Purpose	Remarks
Auxiliary	Decreased Volume of Pollutant (decreased volume of SO _x , dust, CO ₂ , etc.)	t / Year	Planned value at the time of appraisal	To assess the effect of environmental improvement that accompanies energy conversion	It is worked out based on the volume of energy converted (for example, from coal to gas). However, it should be noted that the volume of pollutant emitted at the time of gas production is required to be considered.