

FULFILMENT OF 2017 GOALS AND OBJECTIVES

Level of fulfilment	Goals and result
	<p>■ TARGETS OF THE UPSTREAM DIVISION</p> <p>Implement the energy conservation and improved energy efficiency programmes (466 mn kWh). Achieve the planned specific electricity consumption indicators for the Upstream Division (29.98 kWh/TJ)</p> <p>The goal was achieved, the programme exceeded the targets, and specific electricity consumption was 1.4% lower than the plan for the year taking into account normalization</p>
	<p>■ TARGETS OF THE DOWNSTREAM DIVISION</p> <p>Implement the Downstream Division's energy conservation programme and conserve the following main fuel and energy resources:</p> <ul style="list-style-type: none"> ■ heat energy – 171,500 Gcal ■ fuel – 57,300 TOE ■ electricity – 15.2 mn kWh <p>The goal was achieved and the programme exceeded the targets</p>
	<p>■ UPSTREAM DIVISION</p> <p>Focuses for energy conservation in terms of machinery and technology:</p> <ul style="list-style-type: none"> ■ use of high efficiency electric submersible pump units ■ introducing electric submersible pump units with an expanded work area ■ conducting geological and technical measures to reduce water produced and pump it into the formation ■ installation of variable frequency drives on pumping equipment ■ replacement of submersible cables with cables that have an enlarged cross-section ■ pilot testing of pump equipment with improved performance and efficiency indicators ■ reconstruction/modernization of pump units ■ installation of LED lighting fixtures and the introduction of infrared electric heaters <p>The goal was achieved and these measures were implemented in full</p>
	<p>■ DOWNSTREAM DIVISION</p> <p>Key focuses in improving energy efficiency and energy conservation management:</p> <ul style="list-style-type: none"> ■ improve work efficiency and optimize the processing behaviour of energy and technological equipment ■ reduce the fuel and energy intensity of technological processes ■ reduce losses of fuel and energy resources ■ increase the proportion of steam condensate returned by process units ■ increase the efficiency of heat exchange processes and the generation and use of thermal energy in core and auxiliary processes ■ improve the infrastructure level of core and auxiliary production processes at enterprises with metering devices ■ introduce the energy management system ■ introduce and expand the perimeter of the Energy Management System in accordance with the requirements of the international standard ISO 5000 <p>The goal was achieved and these measures were implemented in full</p>
	<p>■ DOWNSTREAM DIVISION</p> <p>Improve the reliability of power supplies (medium-term objectives):</p> <ul style="list-style-type: none"> ■ search for, adapt, and replicate new technologies, methods, and best practices, establish a new functionality, and increase the use and effectiveness of the system's existing resources (material resources and staff) ■ strengthen and centralize the functional vertical of energy management ■ expand the functions of the Main Control Room as regards the real-time assessment and monitoring of energy equipment reliability indicators ■ systematic work to improve the skill and motivation level of staff ■ perform additional targeted research work in matters concerning reliability <p>The goal was achieved and these measures were implemented in full</p>
	<p style="text-align: right;"> ■ Goal fully achieved ■ Goal partially achieved ■ Goal not achieved </p>