Aug 26 East Timor will tap into its $16.6 billion oil fund to build the necessary infrastructure to attract non-energy investment, the prime minister said on Wednesday, as disputes over undeveloped gas fields look to remain unresolved for years.

Rui Araujo told Reuters the government would not compromise on its demand that Woodside Petroleum build onshore processing facilities in the development of the Greater Sunrise gas fields, a project that could provide billions of dollars to the impoverished nation.

"The problem is that Woodside is trying to impose on us their choices on how to produce that," Araujo said during his first international trip as prime minister.

Woodside, which earlier this year expressed doubts that the project would go ahead this decade, wants to develop the fields through a floating LNG plant.

Even if an agreement can be reached with Woodside, the project could still be held up by a decades-long battle between East Timor and Australia over sharing revenue from the Greater Sunrise fields, which lie in waters between two countries.

Araujo said the government had decided to continue its legal battle against Australia in international court, a process he expects will take years.

The two sides had put the arbitration proceedings on hold for months in the hopes of resolving their differences directly. The dispute stems from East Timor's allegations that Australia used underhanded tactics, including bugging government offices in the capital Dili, during the treaty negotiations.

"We want justice. We want to follow international law and we are requesting what belongs to us," the prime minister said at a Jakarta hotel, shortly after meeting with Indonesian President Joko Widodo to discuss trade and maritime border issues.

Greater Sunrise is 33 percent owned by Woodside, the operator. Its co-owners are ConocoPhillips, Royal Dutch Shell and Japan's Osaka Gas.

With Greater Sunrise unlikely to get off the ground any time soon, Araujo said he is planning a "front-loaded" spending programme to use the nation's petroleum fund to build the required roads, bridges and airports to attract investment in tourism, agriculture and mining.

"One of the important messages I want to convey is the development of Timor Leste is not completely dependent on oil and gas," said the 51-year-old doctor, who took the helm after independence hero Xanana Gusmao stepped down to allow for a younger generation to lead.

After decades under Indonesian rule, East Timor has struggled to develop economically since independence in 2002.

Despite gas production worth billions of dollars, about half of its 1.2 million people lives in poverty, the World Bank says.

(Reporting by Randy Fabi; Editing by Keith Weir)