

Climate Change

Appendix A4 – Peripherique and Northern Highway

Lebanon Super Highway Network - The First Toll Road Project (Lebanon Toll Road Company-ALTOROC S.A.L.)

Source: Investment Development Authority of Lebanon (IDAL)

Background The Government of Lebanon ("GoL") has decided to establish a private company (The Lebanese Toll Road Company S.A.L. "ALTOROC" or the "Company") to build and operate a tolled highway network based on a 35 year concession. The concept of road tolling in Lebanon has been established by Decree No. 70, dated August 5, 1967. ALTOROC will be privately owned, with a proposed capital of US\$ 235 million. ALTOROC will make the necessary expropriation payments to the GoL whose responsibility is to secure the right-of-way for the network. In the future, ALTOROC may apply for other highway concessions in the country.

The Government of Lebanon is expected to provide ALTOROC with a traffic shortfall guarantee. The level and mechanism of the guarantee will be set in a way that will ensure the repayment of the debt drawn during the construction period.

The 32,5 km network comprises two major highways:

The Northern Highway, which will be a 2x3 viaduct connecting the Beirut Central District ("BCD") to the Kesrouan Interchange at Zouk. Construction of the Northern Highway will start in 1999 and the BCD-Antelias section will be opened for traffic in the year 2000. The highway will be fully operational by the end of 2001.

The Beirut Peripherique, which will be a 2x3 ring road at grade around Beirut on the eastern edge of the suburbs, connecting Khaldeh to Antelias. Construction of the Peripherique will start in mid 1999 and the Zalka-Antelias section will be opened for traffic in the year 2001. The highway will be fully operational by mid 2002.

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Traffic & Toll Rates Traffic studies have indicated that the Greater Beirut Area ("GBA") will experience high traffic demand which, when coupled with the sub-standard and already congested network of primary roads, will lead to a paralysis in vehicle movement. The two highways comprising the ALTOROC network connect the most heavily populated areas in the GBA. Traffic counts and surveys, which were conducted in 1994 and again in 1997, provide the basis for the revenue forecasts of ALTOROC. On the northern coastal corridor, traffic counts in 1997 were about 150,000 vehicles per day ("vpd").

Origin-destination traffic matrices were used as input in the Lebanon model in order to forecast traffic flows, as well as the extent of usage of the tolled highways for the years 2004 and 2015. The Northern Highway and the Peripherique are expected to attract 181,000 vpd and 110,000 vpd, respectively in 2004, and 298,000 vpd and 252,000 vpd, respectively in 2015. The overall annual traffic growth on the tolled network is forecast to have a real growth of 5.1% till the year 2015, and would subsequently increase at 2%

until the end of the contract.

Project Costs The total project costs will amount to approximately US\$ 943.8 million spread over the 1998-2002 period, including the expropriation costs estimated at US\$ 250 million in the period 2001-2003, and which must be paid by ALTOROC to the GoL.

Financing Plan The financing plan of ALTOROC envisages an equity capital of US\$ 235 million (25%), internally generated funds (in 2000-2003) amounting to US\$ 193.8 million (20%), and debt financing of US\$ 515 million (55%).

Description / Concept The Government of Lebanon has identified the rapid development of its road infrastructure as a high priority. As a result, it has decided to use a privately financed approach for the provision of a top quality highway network using a Build, Operate & Lebanon ("BOT") like structure. The privately owned and managed company will be formed for this purpose and will operate subject to a BOT contract. The Company's Board of Directors will devise strategies and implement policies that are in line with competitive requirements and the need to achieve commercial returns.

ALTOROC has been designated by the GoL to undertake the designing, building, operating, and maintenance of a highway network, comprising initially two major roads:

The Northern Highway is a 2x3 road, extending from the Beirut Central District ("BCD") to the Kesrouan Interchange (at Zouk). It will be a viaduct approximately 13,5 km in length. The Highway will pass in the Quarantina area, make use of the railroad right of way from Nahr Beirut to Dbayeh, then will parallel the alignment of the existing highway at a height of 9 meters.

The Peripherique Highway is a 2x3 ring road at grade encircling the eastern edge of Beirut, providing a 19 km link of the existing North-South National Highway connecting Khaldeh to Antelias, through Choueifat, Hadath, Hazmieh, Dekwaneh, Baouchrieh, Nahr Al Mot, Zalka and Jal el Dib.

BOT Contract the legal framework for the concept of tolling has been established in Lebanon by legislative Decree No. 70 dated August 5, 1967. The Council of Ministers of Lebanon issued Decree No. 64 on June 11, 1997 to permit the establishment of ALTOROC, which will be allowed to charge tolls on a highway network in return for building, operating and maintaining the network. ALTOROC will be responsible for all construction and operational aspects including toll plazas, connecting interchanges, and all signage and lighting systems. The BOT contract, along with all its legal and commercial facets, will have to be negotiated with the GoL and will be valid for a period of 35 years. The Company will be allowed to collect tolls on any section of the network that is completed and will be required to Lebanon the highways and the tolling equipment in good working condition to the Ministry of Public Works at the end of the contract period. The Council for Development and Reconstruction ("CDR") will be responsible for overseeing the contract execution according to the designs and specifications already prepared for the network. The CDR will also be responsible for applying sanctions for partial or total non-fulfillment of contract obligations.

ALTOROC will be permitted to take loans, issue bonds or use any other financial instrument. The Company will be liable for income tax and dividend distribution tax, currently set at 10% and 5%, respectively. In addition, the company will have to withhold 10% of its profits in a capital reserve fund until it reaches one third of its declared capital.

Traffic studies have indicated that the GBA will experience in the future high traffic demand which, when coupled with the sub-standard and already congested network of primary roads, will lead to a paralysis in vehicle movement. The two highways comprising the ALTOROC network will connect the most heavily populated zones of the GBA. Traffic surveys were conducted in 1994 and in November 1997 and provide the basis for the revenue forecasts of ALTOROC. On the coastal northern corridor, 1997 traffic counts for both directions were about 150,000 vehicles per day ("vpd"). Traffic diversions to the toll roads will vary according to the highway and the existence of parallel alternative roads.

The traffic projections are based on data collected in two parts:

Traffic data: Vehicle counts, turning movement counts, vehicle classification counts, origin-destination surveys, and speed-delay surveys were collected from Nahr Al-Kalb in the north to Nahr Al-Damour in the south, and up to Aley in the east in 1994. In November 1997, data on vehicle counts and origin-destination were again collected on the Northern coastal corridor and on roads located on the eastern edges of Beirut.

Socio-economic data: 4,300 households were surveyed in 1994 in order to forecast 2004 and 2015 trends. Estimates have been made for population growth, household income growth, income levels, workplace location, vehicle ownership, education levels and several other demographic indicators. These have been supplemented by data issued by the Administration Centrale de la Statistique, in December 1997.

Furthermore, a Stated Intentions Survey was conducted in December 1997 to gauge the willingness of motorists to pay tolls. The results have shown that people accept the concept of tolling and are willing, to pay on average about US\$ 3,20 per hour, with people in the high-income category indicating a willingness to pay up to US\$ 8.0 per hour of time saved.

Traffic: Traffic projections for the years 2004 and 2015 have been prepared and have been used as an input in the Lebanon models in order to forecast traffic flows and the extent of usage of the tolled highways. The Northern Highway and the Peripherique are expected to attract 181,000 vpd and 110,000 vpd, respectively in 2004, and 298,000 vpd and 252,000 vpd, respectively in 2015. The overall annual traffic growth on the tolled network is forecast to increase by 5.1% till the year 2015, and would subsequently level off at 2% until the end of the contract.

Project Costs The project costs are estimated at US\$ 943.8 million and are phased over the 1998-2002 period. Construction costs are estimated at US\$ 472.4 million (US\$ 424 million in 1998 dollars).