

I. Executive Summary

Project Finance Advisors, LLC (PFA), of Bethesda, MD USA is conducting a multi-disciplinary study (the “Study”) examining the overall feasibility of Empresa Nacional de Energía Eléctrica (ENEE) providing telecommunication services or transmission capacity to telecom/media operators and other customers in Honduras. The study is funded under a cost share arrangement with the U.S. Trade and Development Agency (USTDA).

This section of the report relates to PFA’s assessment of the market for services that may be offered on a fiber optic network along ENEE’s Rights of Way (ROW). This report is delivered in preliminary format as part of PFA’s “first milestone” in its contract with ENEE. Other deliverable reports for this milestone include a Technical Assessment and Legal and Regulatory review of how ENEE could successfully offer such services, or be restricted from offering such services.

The objective of the Market Assessment is to conduct a comprehensive, in-depth study of the commercial telecommunications marketplace in Honduras and its likely evolution over the next five years, with projections, where possible, beyond the five-year horizon.

As specified in the Terms of Reference of PFA’s agreements with both ENEE and USTDA, this report examines the following areas:

- Current facilities, technology, transmission infrastructure, coverage offered in Honduras by Hondutel or other providers
- Market profile (customer base, service offerings and requirements, satisfied/unsatisfied demand)
- Service pricing and pricing analysis
- Projected evolution and growth trends over 5-year period
- Projected revenues over 5-year period
- Competitive analysis (role of Hondutel; role of current and future alternate providers; estimation of market profile and size)
- Implications for ENEE market entry: strengths/weaknesses, opportunities, risks; timing of entry

PFA’s key conclusions regarding the market assessment are as follows:

- PFA recommends that ENEE not offer “retail” voice, data or ISP services at this point¹. Rather, PFA recommends that ENEE provide “Bandwidth Services” to other telecom/media operators such as voice, data and media operators and Internet Service Providers (ISPs). Large Enterprises will also be targeted by ENEE’s Bandwidth Services offering.

¹ The Legal and Regulatory Assessment, in fact, indicates that such services cannot be offered by ENEE under the terms of its Constitutive Law.

- More specifically, PFA recommends that the network be designed to offer dedicated point-to-point links operating at 2, 45 and 155 Megabits per second (Mbps), and at rates higher than 155 Mbps, should a market demand materialize.
- The core (“backbone”) network as currently envisioned will extend to cities and towns comprising 88% of the combined urban population of Honduras. Inclusion of the optional network extensions raises this figure to 95%. Of the 30 populated places with more than 10,000 inhabitants in the country, 25 could be included in the coverage area.
- The principal route of the network from Puerto Cortés to San Pedro Sula to Tegucigalpa accounts for around 89% of all economic activity in Honduras. If the ENEE network’s coverage were to extend additionally to La Ceiba and Danlí, the corresponding figure would rise to 94%.
- To assess market demand, PFA utilized a “top-down” and “bottom-up” methodology. Based on this analysis, the Carrier to Carrier and ISP segments, and to a lesser extent the Large Enterprise segment, are deemed to offer the greatest potential in terms of demand for Bandwidth Services.
- Domestic Bandwidth Services would be offered on a long-distance and also a metropolitan-area basis. Specifically, metropolitan-area services would be provided in Tegucigalpa and San Pedro Sula, where ENEE has physical transmission rings along its 138 kV grid. Metropolitan-area services should provide a significant portion of expected revenues, but are difficult to estimate given the nascent state of the Honduran telecom sector.
- Hondutel currently does not service high bandwidth demand (speeds greater than 2 Mbps) and, as such, the market for ENEE’s network while somewhat unknown could be lucrative.
- Demand for Bandwidth Services can be expected to grow very quickly (at rates greater than 10% per year) as evidenced by many operators installing their own fiber and by capacity constraints experienced by the few operators offering STM-1 service. The Telefonía para Todos initiative will also stimulate demand as will anticipated liberalization of the market after 2005.
- While the majority of demand is expected to come from domestic services, limited amounts of international customers represent a greater than proportional amount of revenue due to higher pricing. The proposed ENEE network is very well positioned to exploit the opportunities presented by international and cross-border communications.
- Pricing for ENEE’s Bandwidth Services will be substantially below Hondutel’s current tariffs, and should facilitate the evolution of an Open Access regime in Honduras as contemplated by the country’s pending ratification of the Central American Free Trade Agreement (CAFTA) and its plans for integration with regional telecommunications networks under the SIEPAC initiative.

- Because Hondutel is deploying a new fiber-optic backbone, along a route rather similar to ENEE's, there may be a competitive threat if ENEE decides to proceed but then delays structuring, financing and building its network. The ENEE and Hondutel networks could also be mutually complementary, offering the benefit of physical fiber rings along the North-South corridor. Currently, the creation of physical ring structure along this portion of the corridor is not possible due to the topology of ENEE's transmission grid.
- Preliminary revenue projections indicate that ENEE's Bandwidth Services offering could recognize close to \$12 million a year in sales by the end of the forecast horizon (Year 5).
- These positive indications for the market for Bandwidth Services warrant are encouraging indicators that ENEE could successfully build, implement and operate a commercial fiber optic network.