THE CAGAYAN VALLEY RAILWAY EXTENSION PROJECT
FUTURE PROSPECTS FOR GLOBAL REACH, LOCAL NEEDS

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Abstract: The paper is based in large part on the researcher's feature story on the Cagayan Valley Railway Extension Project, published in the December, 1999 issue of the *Japan Railway and Transport Review*. It has been updated and revised to meet the Conference's requirements.

After presenting a historical background, the paper focuses on the railway project itself, from early mentions in the Spanish Period, to construction during the Quirino Administration. A Project Profile now on file in the Railway Planning Division of the Department of Transportation and Communications keeps the vision of completing the rail line into the Valley alive, at least on paper.

The study then looks at what went wrong and proposes reasons why the project was never completed.

The paper concludes by stating that the 1995 creation of the Cagayan Special Economic Zone at Santa Ana, Cagayan (Port Irene) provides a very strong reason for completing the long-dormant project; a purpose which did not exist while the line was being constructed in the 1960's. Anticipated future Zone operations, influenced by its location in relation to leading container seaports in the East Asia region and the possible support role played by the railway provides an argument for completing the project, at the very least, the proposed main line from San Jose City, Nueva Ecija and Santa Ana, Cagayan. A possible regional railroad network in Region 2 and neighboring provinces is also included.

1.1 Historical Roots of the CVR

"The Manila-Dagupan railroad was the single most important infrastructure (project) built in the Philippines during the Spanish colonial period that was not initiated by the Church. It was constructed and operated by a London-based company [known as the Manila Railroad Company – MRC] in the late 19th century, starting in 1887, 62 years after the world's first railroad was built in England. Opened to the public in 1892, the railroad was part of a worldwide trend of technological advances in transportation and communication

that led to unprecedented trade expansion and urban development."[1]

As early as 1876, however, Eduardo Lopez Navarro, senior engineer-in-charge of the railroad planning committee submitted his plan which proposed a total of three lines, for a total of 1,730 kilometers. One was to go from Quingua (now Plaridel), Bulacan to Tuguegarao, Cagayan. His plan was approved on 11 May 1883.

"Work on the second proposed line, from Quingua to Cabanatuan, started soon after the Americans controlled central Luzon at the turn of the century. This line was opened to public traffic in December 1905 and became known as the Cabanatuan line. The Cabanatuan line was the first leg of a railroad intended to service the other large agricultural plain of Luzon – Cagayan Valley." [2]

During the American Period, in addition to the Cabanatuan line, (91 kilometers), another line from Tarlac, Tarlac to San Jose City, Nueva Ecija (55 kilometers) opened in 1939.

William Kline of the New York Trading Company showed interest in extending the line to Bayombong, Nueva Vizcaya, about 270 kilometers north of Manila. Vanessa J. Glynn, a British researcher, commented in her Master's thesis for the University of the Philippines, "Despite only cursory investigations, Kline did not foresee any engineering difficulties and had ambitions for the line to be continued to the Cagayan Valley all the way to Aparri on the northeastern coast of Luzon."[3] American businessman Neil MacLeod was just as ambitious but more experienced, having attempted to send the rails to Antipolo, Rizal via Santa Ana, San Juan and Marikina. He showed interest in a Cagayan Valley route "to tap the tobacco provinces, especially Isabela." [4]

Development of the Luzon railroad network continued up to the start of World War II in 1941. Glynn concluded, "although over-ambitious and ultimately flawed, the railroad policy of the American administrations on the Philippines was throughout based on what was sincerely believed to be the best interests of the Philippines. Development of the country, rather than exploitation was the guiding principle in Philippine railroad policy.' She continued by making this astute observation, "It is possible that *railroads did not fire the imagination* (the writer's emphasis) of the Filipino leaders at a time when bigger questions dominated, or it could be that American policymakers believed that they knew what was best for the colony *and neglected to consult the Filipinos,* (the writer's emphasis) except where constitutionally required to do so."

Documents not available to Glynn but quoted by Corpuz show expectations for the Philippines as perceived by American policymakers and diplomats at the time. He quotes

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1. Corpuz, Arturo G. (1999) *The Colonial Iron Horse: Railroads and Regional Development in the Philippines 1875-1935* Diliman, Quezon City: University of the Philippines Press pg 1
2. Ibid pg 29
3. Glynn, Vanessa Jane. (1987) *Railroad Policy and Administration in the Philippines in the American Period, 1898-1924,* Diliman, Quezon City: College of Social Sciences and Philosophy, University of the Philippines
4. Ibid

one consular dispatch circa 1899: "If now our exports come here interstate duty free, we have practical control of Philippine trade, which now amounts to many millions, and because of ingrafting of American and methods upon the fabulous natural and productive wealth of these islands can and probably will be multiplied by twenty during the coming twenty years. All this increment should come to our nation, not go to any other. Those who come early will reap great rewards and serve patriotic purpose at the same time, while their prompt and successful work will furnish for the glut of U.S. products." [5]

When the Philippines became independent in July, 1946, the nation faced the heavy burden of rebuilding its badly war-damaged economy and infrastructure. During the Elpidio Quirino administration, import and exchange controls were imposed to prevent bankruptcies and to stop the spread of a communist-led rebellion. During this period, Republic Act (RA) 470 of 9 June 1950 authorized the MRC to borrow P45 million ($22.5 million), allowing the MRC to rehabilitate, restore, and extend its lines from San Jose, Nueva Ecija to Echague, Isabela (108 km) and onwards north to Aparri, Cagayan (440 km). Prior to his election as President in 1953, Ramon Magsaysay was General Manager of MRC for the last three months of 1951. This first-hand experience apparently aided him in seeing the importance of modernizing the railroad. A new fleet of diesel locomotives was acquired from Japan through the Reparations Agreement signed in May, 1956. During the Magsaysay administration, the North Line was extended beyond San Fernando, La Union to Bacnotan in the same province.

A total of P78 million ($39 million) was budgeted for four years under RA 1867 of 22 June 1957 to extend the line from the end of the San Jose branch to Tuguegarao. Out of this amount, P48 million ($24 million) were reparations from Japan. At last, work was about to begin on the Cagayan Valley project, 75 years after the first Spanish royal order. The track distance was about 306 km and construction began in the sections on the gently rolling plains between Cordon, Isabela and Tuguegarao in July, 1961. A tunnel through the Caraballo mountains was to be built later.

Building ground to a halt a little less than four years later with NEDA saying that about half the appropriated amount had been spent. What went wrong?

The late Lope M. Padiernos was the Assistant Supervising Railroad Engineer during the construction. He believed that the funding was adequate "at the time" to complete the project. He added that only about P6 million ($3 million) was actually spent. However, release of those funds was too slow by the national government. Sub-roadbed sections were built in bits and pieces and not in sequence from Cordon to Enrile, Cagayan, less than 11 km from Tuguegarao. Ramon J. Jimenez, now Philippine National Railways (PNR) Acting Assistant General Manager for Operations and Maintenance was on the Caraballo Tunnel survey team. He pointed out that during the subsequent Marcos administration the President went to Tokyo for a three day state visit on 28 September 1966, hoping to get more money to finish the project. But instead of finishing the railway, the money was spent to upgrade the existing Maharlika Highway, sometimes called the Japan-Philippine Friendship Highway. Consequently, the heavy equipment, including the

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5. Corpuz, pg 97

tunnel boring machinery for cutting the nearly 10-km Caraballo Tunnel, was sold to alleviate PNR's poor financial conditions.

In 1962, Macapagal introduced his Decontrol Program. For the first time, the peso, which had been pegged at P2 to $1, depreciated to P3.90 against the greenback. This happened while the extension line was being constructed. That devaluation apparently dried up the un-released foreign funding for the project.

Ignoring the calls of Congress, Marcos continued Macapagal's policy of economic liberalization. In 1970, the peso was devalued again under IMF-imposed loan conditions. By February 1970, it had sunk to P5.50 to the US dollar reaching P7.90 by June 1981.

Current Status of the Project

The people at NEDA are not encouraging if studies released as late as 1995 are accurate indicators. The working relationship between NEDA and the Regional Development Councils (RDCs) is an important link in economic planning. The RDCs identify projects addressing vital needs across the country. However, if those projects do not match the agenda prepared by the national government – meaning the President and his closest advisors – those projects are not funded or implemented. This is the top-bottom approach to economic planning, where projects are studied at great expense to the Filipino taxpayer, but very little gets accomplished. This situation has been described as "analysis paralysis." By contrast, Mr. Jimenez says, "Build the line and economic development will follow."

North American railroad expert John H. Armstrong adds: "The real question (of railway expansion) became one of economics; railroads should be built where there was, or reasonably could be expected to be, enough demand for transportation to support the line and pay back the cost of building it. Prosperity and people usually *followed* rather than preceded the coming of the railroad, so faith and luck were important too." [6] (emphasis Armstrong) He also points out, "On the basis of purely technical reasons, locating a railroad line so that it can provide useful transportation at minimum cost is a complicated business…That's not the end of it though. Competitive, political and even such emotional factors as civic pride, sheer optimism and especially greed have often completely overwhelmed engineering considerations." [7]

Meanwhile, the picture is a little brighter in Congress. There are now at least seven bills pending and one House Resolution addressing the need to rehabilitate and expand the railroad network in northern Luzon. Of particular interest is House Bill 801, authored by Rep. Edgar R. Lara of the Second Dist. of Cagayan. The explanatory note says "This bill aims to create the Cagayan Valley Railways Authority (CVRA) which shall provide for an adequate, cost-effective and dependable transportation system between Cagayan Valley and Metro Manila." If passed into law, CVRA would be a government corporation with a 50 year life, renewable after that period. Located in the Cagayan Valley itself, it would receive its authority from the DOTC with funding by an IPO valued at P1 billion (about

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6. Armstrong, John H. (1978) *The Railroad – What It Is, What It Does. The Introduction to Railroading,* Omaha, Nebraska USA: Simmons-Boardman Publishing Corporation. pg 7
7. Ibid pg 8

$23.26 million). Congressman Lara believes a separate agency needs to be created due to the size of its operation and to maintain a distinct regional corporate personality in the Valley. A position paper on House Bill 801 prepared by the Railway Planning Division of DOTC recommends "that the House Bill be guided by a Feasibility Study for the proposed Cagayan Valley Railways before the structure of CVRA is firmed up. This is in view of the fact that while the benefits of constructing a railway network in Cagayan Valley may be evident, several points will need to be considered, revolving primarily on the extent of Government support and private sector exposure that will be required. These can only be determined from the degree of economic and financial viability of the Project that will be established from the Feasibility Study." [8] Key to this study is a passenger traffic demand forecast identifying the potential number of passengers, existing industries that could benefit from railway service and potential industries attracted to Region 2 due to the presence of the railway.

There are four phases shown in the DOTC Project Profile. They are: Balagtas-Cabanatuan (92 kms), Cabanatuan-San Jose (38 kms), San Jose-Santiago (151 kms), and Santiago-Tuguegarao (130 kms). The total distance is about 411 kms. Extending the line to Aparri would add an estimated 98 kms of trackage, 147 kms to CEZA.

The San Jose-Santiago section, is the most challenging. Quoting from the DOTC Project Profile: "In 1970, a Japanese consultant (Pacific Consultants KK of Tokyo) was contracted and they completed the final review of the route location. In 1971, detailed engineering, designs, plans, specifications and working drawings were completed." [7] In view of advances in railway construction technology, particularly tunneling, PNR requested Pacific Consultants to update and revise its 1970 findings in 1980. Those revisions shortened both the main line route and tunnel. The tunnel that would be bored through the Caraballo mountains, 9.7 kms in 1970, is now 5.6 kms. PNR's engineering standards call for gradients to be 1.2% at a minimum. Trains would use this gradient for distances of 10 kms. Then, rest plateaus of 0.20% for a distance of 1-2 kms would be used before resuming the climb up to the south portal of the tunnel. The highest point of the main line is reached inside the tunnel. So the estimated 43 km distance would require four climbs and three rests in this section of the line. Soil conditions are favorable for tunneling according to Dept. of the Environment and Natural Resources data. However, this section of the line lies between two active earthquake faults. A 1990 paper of the Philippine Institute of Volcanology and Seismology warns, "We should also accept the fact that, since earthquakes of (Richter) magnitude 7 or more have also affected the Philippines in the recent past, the likelihood of destructive earthquake occurring again in the future is indeed very strong." A Richter magnitude 7 earthquake causes considerable damage to structures near the epicenter. Thus, track structures and tunnels will need to be earthquake resistant.

Other important factors influencing the entire line are power supply, currency risks, weather, and political will. If the railway could be electrified, that would make more environment friendly. Procurement of track and rolling stock would need to be imported and paid for in dollars. The Cagayan Valley, on average, is hit by about 1 typhoon

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8. Project Profile on the Cagayan Valley Railroad Extension, undated, DOTC Railway Planning Division

annually. The Estrada Administration's record infrastructure expansion, particularly railways, is very poor, if the long-proposed Mindanao Railway Project is an accurate indicator. Removing and relocating squatters along the right of way poses a significant challenge to local, regional and national politicians.

Complementary Projects

Meanwhile, the now-abandoned North Main Line would be taken over by North Rail, an existing government agency. The rehabilitation will be to standard gauge, although PNR now runs on narrow gauge. Perhaps the best reason for finishing the Cagayan Valley project was created on 24 February 1995 when the Cagayan Economic Zone Authority (CEZA) Act became law. Like the proposed CVRA, CEZA is a government corporation that is responsible for development of a special economic zone and free port, like Subic Bay. The Conceptual Master Plan, including a railroad component has been completed and submitted to the CEZA Board of Directors. Aside from acquiring land for a dedicated 6.5 km right of way connecting the Port Irene seaport and air cargo terminal, there are no plans to build a railroad during the first 15-year development phase of the Zone.

Meanwhile, Region 2, which is outside the Zone, has the second lowest road density in the country. CEZA's Final Report recognizes this challenge by saying, "Due to this perceived lack of efficient road systems,the region has difficulty attracting private sector investments because of problems assuring reliable transportation, power, communications, and other support facilities."

North Rail's route south of San Jose would use PNR's abandoned Tarlac branch line to Muñoz, Nueva Ecija. The Balagtas-Cabanatuan branch line from the south, also abandoned, would be restored, as per Phase 1 of DOTC's Project Profile for the Cagayan Valley Railroad Extension, and a new line would filled the 26 km gap between Cabanantuan and Muñoz. This route bypasses Tarlac and brings the Zone and Cagayan Valley communities 16 kms closer to Metro Manila.

CEZA Aspirations

Transport planning within the Zone revolves around the Global TransPark concept (GTP), developed by Dr. John D. Kasarda, Director of the Kenan Institute of Private Enterprise, University of North Carolina, USA. Port Irene, an intermodal rail facility and air cargo terminal would create an efficient and seamless supply chain for investors and businesses within the Zone. The centerpiece of the system is a new regional airport with international capability. Port Irene will be upgraded to international standards. Nine out of 28 of the top ports are located north of Port Irene or to the northeast to the American West Coast. [9] When CEZA is fully developed, it will bring the Philippines' two top trading partners, Japan and the U.S., closer to the country. Taiwan and Hong Kong are also among the leading trading partners of the Philippines. The advent of the container revolution offers another exciting business for the railway.

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9. 1999 Ranking (1997 data) from *Containerisation International Yearbook* and March 1999 *Containerisation International* magazine

The View from Japan & Others

Here is a one vision of railroads in the Cagayan Valley which goes beyond the current DOTC Project Profile. It is based on several concepts from diverse sources. Envision a regional system smaller than the 856-km network of JR Shikoku in Japan and based on an operational framework like the US Wisconsin Central Railway – a company with overseas business interests. The CVRA would employ about 2900 employees and would operate a 467 km main line with at least three, possibly four, branch lines. A secondary main line would follow the north coast of Luzon, providing a rail link with the Ilocos region to the west. The Pacific Consultants 1980 route recommendation and tunnel specifications would be followed.

The branch lines were not included in the Japanese plans. They have been added to make the system regional by linking all the provincial capitals. Strictly speaking, the Kalinga and Ifugao branch lines to Tabuk and Banawe, respectively, are not now within the administrative structure of Region 2, but they still have a geographical kinship with Cagayan Valley. Social, economic, and peace and order are the main factors behind three of the branch lines. Supporting tourism and also possibly mining are the purposes of the Ifugao branch, which would serve the world-famous Banawe Rice Terraces and help bring out mineral resources which remain untapped due to poor transportation. On the short line to Amulung, practical realities may overrule political considerations and it could be added later. The total track length would be a little less than 648 kms. Freight to and from the Cagayan Economic Zone would be a main source of railway revenue. Most freight would be containerized, moving on at least eight container trains each day. Local freight trains would serve the branches and the secondary main line. Container services could also run to the Ilocos region.

A variety of passenger services ranging from local commuter trains to comfortable long-distance expresses would popularize the railways with a minimum of 32 services each day. The fastest limited expresses would cover the main-line distance in little under six hours with another four hours to Metro Manila from San Jose. Currently it takes about 12 to 13 hours to travel from Metro Manila to Tuguegarao by air-conditioned bus.

Both passenger and freight operations would go a long way toward fulfilling a possible CVRA vision statement of becoming Region 2's leading transport provider. At present there is no heavy industry, no large-scale agri-business and no world class seaport.

The American, Japanese and, to a limited degree, even the Philippine experience, not just on Luzon but on Panay Island as well, shows that a railway usually has a positive economic impact on the areas it serves. A railway isn't necessarily better than road transport. There are, however, certain kinds of cargo that, due to size and weight, are better handled by steel-wheeled trains than rubber-tired trucks. Every form of transport has unique characteristics. When working together, more flexibility is brought into a national transportation system. Trains can handle more people and cargo than busses and trucks can. They are not, however, as flexible as motor vehicles. Trains are generally faster and more punctual than motor vehicles. The number of personal injuries/deaths is much lower on railways than on streets and highways, as is the amount of property damage. But trains are more efficient transporters as the distances increase; generally 20 kilometers or farther for passenger trains, 50 kilometers for freights. For short distances, busses and trucks are

more efficient. Bottom line: If one form of transport is missing or under utilized, a transport system becomes less flexible.

Ayala Land regional and urban planner Arturo G. Corpuz wrote: "The railroads of Luzon benefited many of the settlements along its route by significantly improving their regional linkages and thus providing local economies more opportunities to respond to larger markets." [10]

Despite the passage of 36 years, he believes the statement is still true as it applies to the Cagayan Valley Railway Extension Project. He adds: "I think the issue is less of the statement being true but more of priority – priority over other rail projects and, in the bigger picture, priority over other development projects. And then if course, you have to contend with the short versus long term priorities of our decision-makers." [11]

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10. Corpuz, pg 197
11. Corpuz, Arturo G., email message dated 17 April 2000 transmitted to the writer.

Conclusion

Much has changed in the world of transport since the Cagayan Valley Railway Extension Project was stopped in 1964. The creation of the Cagayan Special Economic Zone Authority (CSEZA) in early 1995, now provides a new and compelling argument for re-starting and completing the long talked-about railway project through the Cagayan Valley region; an argument which didn't exist 36 years ago. The purpose for completing the rail line would be to provide appropriate infrastructure to support the sea and air operations of the Zone. Given its strategic location on the northern coast of Luzon, the development of CSEZA building a rail line capable of moving the amounts and types of cargo expected to move through the planned sea and air facilities would make the Zone more attractive to would-be investors and businesses that stand to benefit from locating in the Zone. Trucks alone cannot be expected to handle the movements of raw materials and finished products that would move through the envisioned transport facilities of CEZA. Thus at the very least, the construction of a standard gauge, single track main line serving as a bridge route from CEZA to San Jose, Nueva Ecija and beyond to Metro Manila via the restored Cabanatuan branch and north main lines should be reconsidered. The creation of a regional network is an option that could be added after the main line is built. It is a perceived notion that it is difficult to move to and from the Cagayan Valley via land transportation. If that notion is to be overcome, rail passenger service offers a possible solution considering the distances that exist between major Region 2 cities and towns and the national capital.

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APPENDICES

Map of Luzon Island showing places mentioned in the paper

Map showing the envisioned Cagayan Valley Railways network