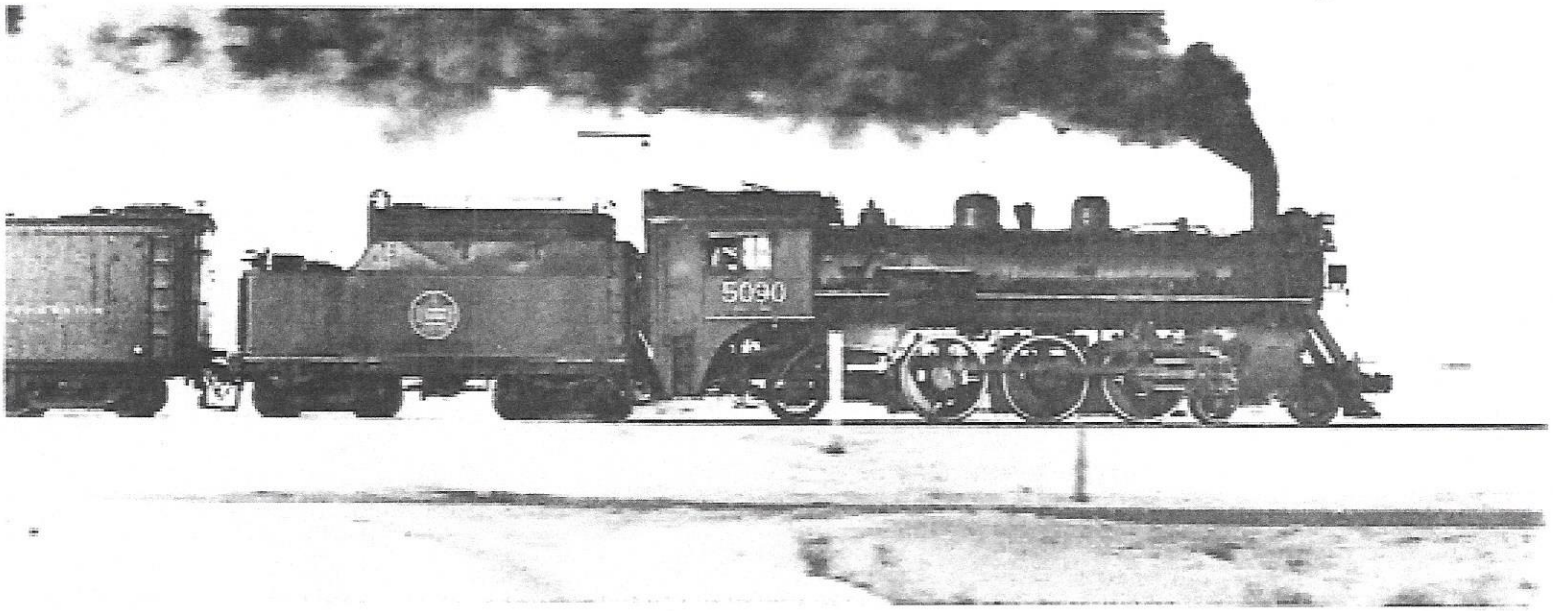
Farewell to steam

The dieselization of CNR motive power



CNR locomotive No. 5090 at full steam. (PA-38689)

In the year 1950, few railwaymen anticipated the rate at which steam-powered locomotives would disappear from the Canadian rail transportation. Post-war austerity and the vigour of competition from the trucking industry had required critical railroading adjustments, and in the interests of economy and efficiency, both major Canadian railways were already busy experimenting with alternative means of motive power, principally mainline road diesels. The Canadian Pacific Railway had accepted delivery of its first diesel road locomotive in February 1949, and in that year used diesel locomotives for its overnight Montreal to Boston service. At Canadian National, North American pioneer in the adaptation of the diesel engine to railway traction, road freight diesels were operating in pairs along the Grand Trunk Western between Chicago and Port Huron and along the CNR mainline between Montreal and Toronto. A policy to dieselize lines on Prince Edward Island was in place, and the diesel-electric locomotive had become standard equipment for switching purposes in main terminals. Two demonstrator diesel locomotives, one loaned by General Motors Diesel Limited, the other by the Montreal Locomotive Works, were operating in passenger service between Montreal and Winnipeg as part of an experiment in performance and fuel costs. Despite these innovations, however, a complete dieselization of the railway still appeared to be some twenty years off, at least according to the most up-to-date CNR studies. As then transportation engineer P.O. Mathewson reported to CNR president Donald Gordon, there was little possibility of the purchase of any further steam power for the railway, but "it would be unsafe to make a generalization as to how far diesel-electric road locomotives will displace existing steam locomotive equipment in the reasonably foreseeable future."

Just ten years later, on April 25, 1960, CN 6043 made the last scheduled steam run on the system from La Pas to Winnipeg, Manitoba. As of December 31, 1960, all remaining steam locomotives were struck from the company's records, and within a year most had been dismantled. The 2,445 steam driven engines listed on the 1950 CNR locomotive roster were gone.

From a corporate perspective, what transpired during this remarkable technological transformation is partially revealed by the presidential office files of Donald Gordon, which are currently in the custody of the Government Archives Division under Record Group 30 (Records of the Canadian National Railways). It is here, principally in volumes 13093 and 13094, that we are able to chart the progress of CN dieselization through the 1950s, beginning with the formulation and implementation of the "Five-Year Program." A product of Gordon's single-minded determina-

tion to have "a program in respect of dieselization" and the views of the Research and Development and Operating Departments as represented in their comprehensive four-part study, *The Economics of Dieselization*, the program initially called for the displacement of approximately 350 steam locomotives through the purchase of 270 diesel units over and above those already on order as of October 31, 1950, together with a concurrent reduction in coal purchases of 1,855,000 tons (28.4% of the coal used on the system). The program was tentatively scheduled for completion in 1956. Soon after its inception, however, recommendations to accelerate diesel acquisition "on the basis of economics" were advanced by the Operating Department. In purely financial terms, the rate of return on the capital investment had proved to be more than satisfactory, while the system itself had demonstrated repeatedly an operational capacity to absorb dieselization at a greater rate. Simply stated, it made sound economic sense to accelerate the program, bearing n mind the need for more detailed planning as dieselization progressed.

By 1956, the issue was no longer merely the bsorption of dieselization but "complete dielization." Factors favouring complete conersion to diesel power and a consideration of ts timing were submitted to Gordon by the Iead quarters Diesel Committee headed by ice-presidents S.W. Fairweather (Research nd Development) and S.F. Dingle (Operaion), largely based on information gathered by he Office of the System Transportation Engiieer. A research paper was produced, entitled An Economic Study of Complete Dieselization n the Canadian National Railways," which roposed a new five-year period to achieve ystem dieselization. One major change in the rogram was adopted aside from the accelerao: where diesels were formerly introduced rogressively in the region of greatest operatg savings regardless of territory, there would ow be dieselization on a successive territorial asis, starting with the Atlantic Region. Only vo years would pass before Dingle would lvise Donald Gordon: "You will be interested know that as of this date the Atlantic Region completely dieselized and there will be no rther steam power operated in that territory" pril 14, 1958).

Such comprehensive technology change rought at such bewildering speed had of urse far-reaching economic, sociological, mographic and political consequences, me aspects of which are touched upon by the ordon presidential papers. Of special interest this regard is the interdepartmental corrondence on the subject of public relations, d especially a study prepared by the Department of Public Relations in 1952, entitled "Dieselization: The Public Relations Aspects." Comprising thirty pages, this document assesses from a senior management perspective many of the more sensitive issues that attended dieselization: the effect of layoffs and the redeployment of human resources, shop closures and their potential effect on the community at large, the economic depression of the maritime coal industry, "fear and unrest," labour union, etc. A complete public relations campaign was mounted "to offset negative public thinking with positive company action in order to convince personnel and public alike that in approaching the problem, management has given as much consideration to the humanities as to the economics involved." Yet as dieselization forged ahead, the "human factor," as Gordon called it, would remain an issue, a problem to counter-balance the economic success of the CNR program.

Perhaps in the final analysis it would be well to remember that dieselization was as much a social-human process as it was a process of technology. Nearly everyone was affected in some way, and for those Canadians whose economic welfare was intimately connected with the steam locomotive, the fabric of life was irrevocably changed. Oftentimes we look back upon the age of steam with fond remembrance and something approaching reverance. It may now be time to place the hardware of railway motive power in its historical background by exploring the sociology of dieselization.

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