An Up to Date on La Romaine Complex, The Most Important Hydroelectric Project Under Construction in North America

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Hydro-Québec is developing the Hydroelectric Complex of La Romaine, situated on the North shore of the St Lawrence River, in Quebec, one of the most important development projects in Canada. The 6.5 billion $CAD project consists in building 4 generating stations with a total installed power of 1550 MW and an output of 8,0 TWh. The clean and renewable electricity produced in the four power plants of the Complex will help to avoid new emissions of gas with greenhouse effect in North America with approximately 3 million tons of CO2, if that energy would have been generated with natural gas and with about 7.5 million tons of CO2, if coal would have been used for the same purposes. Environmental studies and measures carried out before, during and after construction until 2040 will cost over $385 million altogether. The erection of the Complex started with the Romaine 2 facility, completed in 2014: the impounding of the Romaine 2 reservoir begun in May, 2014 and finished in November, when the first Megawatts reached our customers. Romaine-1 facility was commissioned in December 2015, and Romaine 3 was inaugurated by the Prime Minister of QuÉbec on October 19, 2017. Finally, the design and construction of Romaine 4 facility are well in progress and the diversion of the river occurred in May, 2018. The beginning of the impoundment of the reservoir is scheduled in June, 2020, after the passing of the spring flood and the commissioning of the 2 units is scheduled on the winter of 2021-2022. The 6 Asphalt Core Rockfill Dams of Romaine 2 reservoir are behaving very well and a comparison with similar structures from Norway and Austria is presented in this paper.