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DEPARTMENT of the INTERIOR

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ADDRESS BY SECRETARY OF THE INTERIOR STEWART L. UDALL BEFORE CANADIAN CLUB OF TORONTO AND EMPIRE CLUB, ROYAL YORK HOTEL, TORONTO, CANADA, NOVEMBER 15, 1965

In nearly five years as Secretary of the United States Department of the Interior, I have visited Canada to inspect and discuss resource problems on several occasions. My trips to New Brunswick, to Vancouver, to Ottawa, and to the Great Lakes country have strengthened my conviction each time that we have much to gain from closer cooperation in the conservation and development of our resources. Each time I cross our border, I become more and more impressed with the common bonds which tie our two nations in close friendship. And, each time I am drawn into discussions of the vast natural resources of Canada and the United States, President John F. Kennedy's words take on true meaning and significance. Before a joint session of your Parliament in 1961, he said:

> "Geography has made us neighbors. History has made us friends. Economics has made us partners. And, necessity has made us allies.... Thus, ours is a unity of equal and independent nations, cotenants of the same continent, heirs of the same legacy, and fully sovereign associates in the same historic endeavor."

In the intervening years Canada and the United States have shared in each other's progress and have contributed to each other's self-realization.

The figures are well known to all economists, but last year alone, 62 percent of all Canadian exports were sent to the United States, and 68 percent of your imports were obtained in the United States. Conversely, 20 percent of our exports went to Canada and we received 19 percent of our imports from the North.

As you well know, the United States draws heavily upon Canadian raw materials. For example, three-eights of the petroleum production of Canada is consumed in the United States. By the same token, Canada is the largest customer for exports of United States coal--and both nations benefit immeasurably from this exchange of energy.

American citizens have invested about $20 billion toward the capital development of the Canadian economy, and Canadians, on a per capita basis, have invested even more in United States industrial development. In short, we are the world's best partners in mutual assistance efforts that make our joint standard of living the highest for any continent in the world.

President Johnson has characterized this Canadian-United States partnership "as a model to the world...built upon four pillars. The first pillar is peace. The second pillar is freedom. The third pillar is respect. The fourth pillar is cooperation."

And, it is on this fourth pillar of cooperation that the future growth of Canada and the United States rests--as clearly evidenced by the increasing interdependence of the people of both nations on the abundant and varied natural resources of North America.

Many nations on this earth are separated by natural barriers, but the border between our two nations is not one of them. Birds fly over it, fish swim through it, pipes and electric power transmission lines cross it at many points, ore bodies lie under it, stands of timber straddle it, and rivers traverse it. Our continent is a single ecological unit, and the cooperative development and protection of the resources of this continent is a challenge we jointly face as each year we make decisions concerning our future.

Prime Minister Pearson pointedly summed up this responsibility when he said, "This is what our two countries are uniquely fitted to do, to join together in the constructive development of our continent's resources for the benefit of present and future generations."

The great strides by both Canada and the United States have, of course, been in the mutual development and use of the energy resources of each. This, I would point to as the classic model for cooperation because it is built entirely on mutual freedom of choice--not necessity.

Either of our nations could become independent of the other or of other areas of the world from the standpoint of energy exchanges. For both of our nations this would entail added burdens--but not impossible ones. Thus from moment to moment the pattern of energy exchanges between ourselves and with other areas of the world is, to a very large extent, a reflection and recognition of mutual advantage. Herein lies a major source of strength for our economies and, at the same time, a source of numerous problems. Both the United States and the Canadian economies must have the cheapest possible energy to stay competitive in the world market place. Efficiency is the real genius of our economies--and we must constantly reduce the cost of energy if we are to achieve this goal.

In my view, we must look at the North American Continent in a new light from the standpoint of the world's energy requirements. Our thinking must not be limited by the parameters of today's technology. To the extent that we rely on supplemental supplies of energy from other nations we must realize that this may prove to be a transitory element in the overall energy picture.

Let me say further that the technological development of the latent energy resources of North America is, to a very large extent, the product of our action. It is for us to choose the pace and extent of our technical advance. There are

indications both in Canada and in the United States that the tempo of technological change will continue apace.

Electric power is a prime example of joint technological development whose benefits we have mutually shared.

Many Canadians and Americans labored over a 20-year period to bring about the Treaty between the United States and Canada for the development of storage on the Columbia River. The Columbia Treaty provides for the orderly construction of Duncan Lake, Arrow Lakes and Mica Creek Dams in Canada, and Libby Dam in Montana. It provides for the controlled release of 15½ million acre-feet of stored water annually from British Columbia reservoirs to produce great flood control and power benefits on the main stem of the Columbia River.

The initial benefits for the full development of the Canadian storage projects amount to nearly 2,800,000-kilowatts of dependable capacity and nearly 8 billion kilowatt hours of annual energy. These power benefits are to be divided equally between both countries. Canada is also to receive $64,500,000 for operation of the storage for flood control purposes.

Since the Province of British Columbia was going ahead with the Peace River Development, arrangements were worked out whereby the Canadian entitlement for United States projects on the Columbia was sold to the Northwest utilities in the United States for a period of 30 years for $254,400,000. The sale of this power has already accelerated the development of the natural resources of both nations.

The Treaty gave impetus to the development by the United States of the Pacific Northwest-Pacific Southwest Intertie which ties the power systems of Canada and the United States together extending from the Peace River in British Columbia to the City of Los Angeles in southern California and Hoover Dam in Nevada and on to Phoenix, Arizona. The Intertie permitted an interim sale of Canadian entitlement power in California. It also opened the door to the current construction of three new giant dams in British Columbia. This bold new joint approach which provides for water conservation, orderly development of the power resources, and extra-high-voltage transmission lines will provide enormous economic benefits for both countries.

In Portland, Oregon, President Johnson celebrated this new action program by observing:

> "This intertie which is the result of so many brains and so much work, and such great efforts, is the most exciting transmission system in history....This system is also proof of the power of cooperation and unity."

The Pacific Northwest-Southwest Intertie essentially will connect the major transmission systems of British Columbia and the 11 Western States of the Continental United States. It could be considered really the out-growth of the

Bonneville transmission grid which was patterned after the first major electric grid on the North American Continent, if not in the world, developed in Ontario around the beginning of the century.

This pattern certainly can be extended to our mutual benefit and hasten the development of a unified extra-high-voltage grid system between our nations. The six important interconnections now between Canada and the United States could provide the basis for further pooling of our resources. A week ago we might have averted serious power outages in both countries if stronger power interties had been in existence.

Since 1961, my department has been reexamining the possibilities of hydroelectric development of the Upper Saint John River. Based on this effort, we have thus far authorized the Dickey-Lincoln Schools Dams in Maine on the Upper Saint John River. The construction of this large project will make possible the development of a large block of power in northern Maine for New England and also increase the power production at downstream plants on the Canadian side of the Saint John River. Here we have the reverse situation of that of the Columbia River in the Pacific Northwest.

An agreement between our countries will be needed. The joint engineering studies are largely finished. I am confident that agreement will be reached and the Dickey Project will be built. An interconnected extra-high voltage transmission system between our countries may well follow. With such a system, there could be exchanges of energy, great diversity gains, improved efficiencies and opportunities to bring in new untapped resources.

Indeed, the prospects are brilliant. In Canada you have at Churchill Falls one of the largest potential hydroelectric projects in the world. Here it is possible to develop 6 or 7 million kilowatts of continuous firm power--power to be marketed in Canada and also in the United States. The giant interconnections which would be necessary in marketing this power would immediately create substantial diversity benefits for the New England-New York area and the Quebec-Maritime Provinces.

The tidal power resources of the Bay of Fundy are formidable. Here exist the highest tides in the world. They range up to 55 feet and average about 28 feet. Modern technology has given us the key to that development--in newly-designed turbines and generators and in high-voltage direct current and alternating current transmission lines.

The development of a strong transmission grid between our countries can aid in topping the tidal power resources of the Bay of Fundy which we in the United States are continuing to look at. In Canada you are studying such favorable sites as Cumberland and Shepody Bays, as well as Minas Basin.

Canada has been blessed with many great rivers which undoubtedly must be developed to meet the needs of tomorrow. The potential of the Nelson River Basin of Manitoba exceeds 5 million kilowatts. Power from this source could certainly

be marketed in Winnipeg, Minneapolis, and St. Paul. The transmission systems which will be utilized to market this power will allow the free flow of energy between the two countries. There are many other potential sources of low cost energy in British Columbia.

Electric loads in both countries will continue to grow rapidly in response to population growth. Power requirements in the United States will double over the next 10 years and will more than double in Canada. This means that our two countries will have to spend in the next 10 years more for generation, transmission, and distribution of electricity than we have over the previous 80 years. The industrial prosperity of our countries is fully dependent on an abundance of low-cost electric power. Our countires will, of course, get the most for their money only through strong international and regional pooling.

This across-the-border power planning has several advantages for Canada. Salable energy to the United States in the early years will accelerate the development of resources in Canada and it will assure Canadians of a developed domestic source of supply for home markets when needed.

Growth of the power industry has and will continue to require the intensified use of hydroelectric power for peaking purposes. And all power systems require vast quantitities of base load energy. This base load energy will in the foreseeable future be supplied by very large thermal plants--either nuclear or fossil-fueled steam electric powerplants. Fuel for these plants will accelerate the production of coal, oil and gas, both in Canada and in the United States. It will lead to the mining of more coal and the production of more uranium.

The building of great dams and power stations and extra-high voltage transmission grids is not the only instance in which our joint efforts have been of mutual benefit. We enjoy a large and profitable trade in all the conventional sources of energy and some unconventional ones as well.

The Nuclear Age was opened up by the United States with Canadian uranium, and Canada continues to be our major outside source of this vital material. Canada in turn is the prime foreign market for United States coal--a vast resource stable in supply and low in cost--and we hope we may continue to deserve and receive your business in increasing volume in the future.

In the case of petroleum and natural gas, the flow runs the other way. Approximately 35 percent of Canadian oil production and about a third of its natural gas are exported to the United States. The growth of oil trade between our two countries over the past five years is of particular interest, I think. Following the publication of the Borden Commission Report and the setting of national goals for Canadian petroleum production, your exports to the United States increased from the 1959 level of 92,000 barrels a day to a current figure of about 315,000 barrels a day. This growth, which has averaged a remarkable 23 percent annually has been levelling off in recent months, but it will continue to be an important element in Canada's dollar earnings and export trade.

In oil, in natural gas, in coal, uranium, and hydroelectric power, our two nations must go through a constant balancing of short-term considerations versus long-term interests. I am convinced that over time, we will achieve even greater cooperation in our national policies relating to the development and use of our energy resources. The growing interdependence of our two peoples, along with their growing numbers, requires closer coordination than ever before in the management of the resources on which our hopes for a better world depend. In the meantime, I think we can all be encouraged by the very substantial progress we have made over the past five years.

Modern technology has equipped us with tools to develop our great natural resources. We can build the dams, the tidal powerplants, the D-C and A-C extra-high voltage transmission lines. We can find petroleum and gas. We can unlock the reserves of oil shale and tar sands. We have abundant and stable supplies of coal and uranium on the North American Continent. We have a growing industrial complex in Canada and the United States which will draw increasingly on these energy supplies and we have a commitment to our people to use energy to create a better way of life.

We have the resources and the technological know-how. Now our countries must use the tools which are already in our hands.

As a first step, we must discontinue talking about one energy source as a substitute for another. The task we face is the continued and accelerated development of all energy sources and the phasing of these resources into our two economies, so as to achieve the best production patterns and the proper utilization.

We must be bold--aware that every energy projection has been surpassed. I pledge the fullest cooperation of the Government of the United States as we go forward with the joint development of the energy resources so vital to the future of both Canada and the United States. And, I am sure this vision of tomorrow does not halt at the border.

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