



**MINISTRY OF HOME AFFAIRS
2020-2021 BUDGET BRIEF
Department of Energy
HEAD 89**

**PRESENTED BY
The Hon. Walter H. Roban, JP, MP
Minister of Home Affairs**

Found on Pages B-328 through B-330 of the Approved Estimates of Revenue and Expenditure

Mr. Chairman,

I am pleased to present the budget for Head 89, the Department of Energy, found on pages **B-328– B-330, C-8, and C-16** of the Approved Estimates of Revenue and Expenditure.

MANDATE AND MISSION

The Mission Statement of the Department of Energy has been simplified in alignment with the Government Reform initiative and the expansion of the Department's remit to read, 'We promote, advocate and develop policy and legislation for the Space, Energy and Telecommunications industries.' With the amalgamation of the Department of Telecommunications, the mandate of the Department has focused much more on the development of the space and satellite sectors than it had in the past, and this new Mission Statement reflects a broader approach to the three sectors.

The Department's functions span the entirety of the three sectors, and include policy guidance, assisting in the development of legislative frameworks, public outreach and engagement, and enhancing opportunities for investment both from without and within Bermuda.

EXPENDITURE OVERVIEW

Mr. Chairman,

The total current expenditure for Head 89 is estimated to be eight hundred and eighty thousand dollars (\$880,000), is found on page **B-328**, and represents no difference from last year's figures. Staffing levels

have remained constant throughout the year, and work has continued with various ongoing projects. There has been some movement of funds in various categories delineated below.

SUBJECTIVE ANALYSIS

Mr. Chairman,

Advertising and Promotion found on page **B-329** on line 5 is allocated sixty four thousand dollars (\$64000), an increase from last year's budget of fourteen thousand dollars, or 28%. This budget is used to host conferences, workshops and summer camps, essentially capturing the expenses of the Department's outreach and education activities in both Energy and Telecommunications-related areas.

Mr. Chairman,

Page **B-329** line 6 shows the allocation for Professional Services which includes consulting services. The total in this area has decreased slightly from last year's overall allocation for these areas, by fifteen thousand dollars or 4%. Within that allocation category there have been some changes, as there will be more reliance on overseas consultants as the Department works toward developing the Space and Satellite industry for Bermuda. There is also an allocation highlighted in **C-8** which I will expand on further under the heading of "Capital Expenditure". Consultants are hired where the Department's capacity is exceeded, generally for special projects and singular pieces of work, for which the creation of a post would be unnecessary due to the duration of the work.

MANPOWER

Mr. Chairman

The manpower estimates for the Department of Energy as outlined on page **B-329** are four (4) full time posts, all of which are filled by Bermudian employees. This is no change over the previous year.

OUTPUT MEASURES

The reform project of the Public Service has seen every Department modernize and update its performance measures. In part, the Department of Energy's remit has been to ensure a reliable and continued interface with the public on Energy and Telecommunications matters. In this manner, the performance measures for the Department found on page **B-330**, are those which are readily quantifiable, to ensure that the public is given regular and maintained information in a proactive fashion. The performance measures are new, and we seek to build on these in future.

REVENUE

Mr. Chairman,

The Revenue Summary for the Department of Energy can be found on Page **B-329**. These figures represent the Government Authorization Fees in the electronic communications and electricity sectors. Telecommunications is expected to take in approximately fifteen million, two hundred and twenty four thousand dollars (\$15,224,000) by the end of the fiscal year, and electricity sector will earn approximately two hundred thousand dollars (\$200,000) in revenue. Spectrum Band Fees are anticipated to earn approximately two million, five hundred thousand dollars (\$2,500,000), about the same as last year. In

total, with various commercial fees and mass media fees, the Department's revenue is projected to be about eighteen million and seventy six Thousand Dollars (\$18,076,000), which is a slight increase of One Hundred Ninety One Thousand Dollars (\$191,000) or 1% over last years' estimates, due mainly to slight adjustments to some of the radio licensing fees.

CAPITAL EXPENDITURES

Mr. Chairman,

The Department of Energy's Capital Development budget can be found on Page **C-8**. The first line item, under Business Unit 75269, Satellite Orbital Slots, shows a figure of Two Hundred and Fifty Thousand Dollars, (\$250,000). This budget has been used in the past largely in consulting fees to guide us in the commercialization of Bermuda's satellite slots, which is part of the broader project of building Bermuda's space and satellite industry. In the coming year, this budget will be used mainly for consulting fees as policies are developed, and where appropriate, legislation will be developed around the commercialization of our satellite assets. This is a sixty-seven percent increase (67%) over last year's budget.

The second line item, Business Unit 75344 shows no funds being allocated for this work, namely the Solar Photovoltaic Facility at the LF Wade International Airport, as that project is approaching completion and is scheduled to be operational within the next few weeks. There is no work anticipated for the coming year on this project.

Mr. Chairman,

The Department of Energy's Capital Acquisition's budget can be found on page **C-16**, and shows the single line item of the Energy Rebate. This year's allocation shows a figure of One Hundred Thousand Dollars (\$100,000), which is a sixty percent (60%) reduction over last year's figures. This is in part due to the improved feed-in tariff that should encourage more voluntary uptake of renewable energy, and the continued decreased costs of solar technologies worldwide.

MAJOR ACHIEVEMENTS

Mr. Chairman,

This past year, the Department has continued with the Solar Rebate programme, striving to benefit those in smaller residences and encouraging ordinary homeowners to adopt solar photovoltaic panels to take some demand off the grid. Such adoption clearly and obviously benefits the homeowners, by offering them a price for the electricity flowing to the grid. What is less obvious but no less important is that for every kilowatt deployed, there is less Bermudian capital spent on foreign fuel. While solar PV in and of itself with no storage serves only to displace fuel use, that alone is a meaningful offset, and serves to help stabilize at least a part of every rate payer's fuel surcharge. Thus far, the Rebate Initiative has deployed about a quarter of a megawatt of solar PV over fifty-six homes with ninety applicants to date. The total amount spent on the rebates so far is two hundred and eleven thousand, six hundred and ninety nine dollars (\$211,699.00) with a further seventy-six thousand dollars (\$76,000) possible depending on whether the projects applied for are completed in this fiscal year.

Mr. Chairman,

Another initiative aimed at energy efficiency this past year is the LED exchange initiative, launched in May, 2019. The Department worked with the retailers themselves to ensure a smooth and workable solution, in which customers exchanged an old incandescent bulb for a new, efficient, 60-Watt equivalent LED. In all, the Department paid for a total of ten thousand, seven hundred and ninety four (10,794) LED bulbs for a total of sixty three thousand, two hundred and fifty four dollars (\$63,254). Toward the end of the initiative, we allowed customers to exchange up to ten bulbs at a time. If the lifespan of the LEDs are about twenty years, and assuming they are used six hours per day every day, then the savings from this one initiative over the lifespan of those bulbs is more than four million dollars. We are proud of that result and that return on investment, as that capital will circulate in the local economy rather than being sent offshore to buy foreign fuel. Each bulb will save over three dollars each month with the use described, and for every month thereafter in its lifespan, at present rates. Apart from the monetary savings, over twelve thousand metric tons of carbon dioxide will have been prevented from being released into the atmosphere. This is good news for our wallets and our environment, and shows how small measures, together, add up to result in sizeable outcomes.

Mr. Chairman,

In August 2019, the Department hosted two weeks of Space Camps for Bermuda Public School students, for a total cost of nineteen thousand, seven hundred and thirty three dollars (\$19,733). Selected by the Ministry of Education, there were a total of thirty-five (35) students from various Middle Schools enrolled, with students from each Middle School. Through connections made through the Space and Satellite Advisory Panel, a team from the NASA Wallops Space Center conducted the first week, and the second week was led by a team from the Challenger Learning Centre of Alaska. During these weeks, students learned about Bermuda's unique importance to space missions both in the past and in future, that without the earth stations in St. David's, the International Space Station would not be possible. While making a contribution toward increasing the cultural awareness and support of space industry, an important feature of the Space Camp was in the teaching of the scientist's process, with critical thought, defining the challenge of an exercise, and working pathways through it. The response from the students who attended was overwhelmingly positive, and the Department looks forward to hosting Space Camp once again.

Mr. Chairman,

The Department has also continued to build on the relationships established in the past, particularly as it continues its work with the Rocky Mountain Institute, or RMI. RMI, an independent nonprofit organization renowned for its work as a leading think tank for renewable energy and climate change solutions, has been working with the Department of Energy and the Department of Public Transportation over the past year to help develop solutions to address our energy issues.

The Department has worked with RMI over the course of the year to establish a process by which it might evaluate prospective sites for solar development. Among the criteria was the need to utilize brown-field sites and rooftops, leaving our green and open spaces to their primary purpose, of providing important natural buffers between developed areas, allowing habitat and scenic vistas to be preserved. Prospective sites were those Government controlled sites that offered sufficient space for efficient and effective deployment of solar PV, and about two hundred and nineteen (219) sites were identified as being optimal for development, with additional sites in less-optimal but still having some development potential. Those optimal sites include rooftops, land parcels, car parks, and water catchments throughout the island. There are a total of over two hundred and forty four thousand (244,000) square meters of rooftop spaces and

eight hundred and fifty seven thousand (857,000) square meters of land parcels that may be considered for solar development, and the exact numbers will vary as the developments are engineered and procured. The next steps will be to move toward developing those sites and de-risking them, in order to ensure a fair and just procurement process, in which Bermudians will participate.

Mr. Chairman,

In December of 2019, there was a plenary meeting of the Space Advisory Panel. In that meeting, progress was made in finalizing Bermuda's first National Space Strategy, which I hope to unveil within the next few weeks. Among the considerations that have shaped the Strategy are:

- how to leverage, preserve and promote Bermuda's sterling reputation as a responsible and leading jurisdiction in which to conduct business,
- how to enhance domestic space and space-related capabilities; and
- how to raise Bermuda's profile in the international space community.

All of these efforts are to effect perhaps the most important outcome, that of generating a sustainable revenue from our national orbital allotments and our space-related industries. I look forward to reporting more on developments in this sector to this Honourable House in due course.

Mr. Chairman,

In January of this year, the Department hosted the Space Sustainability Workshop, in partnership with the Secure World Foundation, a nonprofit organization dedicated to working with governments among others to develop and promote the secure, sustainable and peaceful uses of outer space. The workshop was attended by members of the insurance industry, representatives from BIOS, internal stakeholders including staff members of the Department of Environment and Natural Resources, and the Regulatory Authority. As Bermuda develops its space and satellite sector, sustainability is critical in order to ensure that ours is a jurisdiction of best practice and a centre of excellence. Holding ourselves to a high standard in the satellite industry will ensure that our reputation is upheld and enhanced, just as it is in the shipping and aircraft registries.

Mr. Chairman,

Last but not least, the Department, in conjunction with the Ministry of Public Works, have worked diligently throughout the year with the developers of 'The Finger', and the project is drawing to a close. This project will deliver six megawatts of solar energy to the grid during peak times of production, which will obviate the need for at least some of the diesel powered peaking engines at the utility during those times of production. This represents a significant step forward in creating a more sustainable energy future, and will serve as a benchmark for all projects of this nature as we look toward the fulfillment of the Integrated Resource Plan. We look forward to reporting more about its operations once it is operational, which is scheduled to be completed within the next few weeks.

PLANS FOR THE UPCOMING YEAR

Mr. Chairman,

In the coming year, the Department will offer the Space Camps again, as noted above. Continuing the Space Camp initiative will ensure that Bermudian students will learn the critical role of Bermuda in the space industry, and learn to solve real-world problems using methodology and technology developed for space. While it is not our goal to develop astronauts necessarily, we hope to promote critical thinking and scientific process, igniting fires in young minds around the STEAM curriculum.

Mr. Chairman,

The Department will continue to work with the Rocky Mountain Institute and other stakeholders to advance Bermuda toward its renewable energy goals. Distributed solar is an area that could provide some 'quick wins', and the work that RMI has done to date identifies many sites, as noted above, most of which are perfectly suited for smaller commercial scale development. The next steps are de-risking the projects and putting them out to tender.

Mr. Chairman,

While the rebate initiative has provided much benefit to the community as noted above, we need to ensure that benefits are directed where they will have the greatest impact. In the coming year, we seek to re-design this initiative to be even more targeted at those who would not otherwise be considering solar technologies for their homes, rather than serve only as incentive to tip the scales for those who were contemplating solar PV anyway.

Mr. Chairman,

The Department is also building on its local relationships, and is working with the Bermuda Business Development Agency (BDA) on hosting the Energy Summit. Last year, we moved the Summit to a biennial format, and this year is thus a Summit year. This year's Summit, scheduled for November, seeks to highlight the business opportunities around the energy sector, and will be held over two days, with international and local participants. We look forward to revealing the final curated product, and encourage those wishing to attend to contact the Department over the coming months.

Mr. Chairman,

I am also pleased to inform this Honourable House that the Ministry and the Department have been working with the BDA, the Regulatory Authority to attract innovative energy technologies to Bermuda. To that end, we will be bringing to the House amendments to the Regulatory Authority Act 2011 and the Electricity Act 2016 to introduce special licences to allow new technologies to test their innovations in Bermuda in the same way as the regulatory sandboxes that are promoted by the Bermuda Monetary Authority.

Mr. Chairman,

The Department will also review and update the 2011 Energy White Paper. Since that time, technology has advanced, pricing on renewable energy has decreased, climate change events have amplified, and these all bear upon the relevance of that initial policy statement. This year, the Department will strive to harmonize the White Paper with the recently-published Integrated Resource Plan, ensuring that policy and practice are well aligned.

Mr. Chairman,

In closing, I would like to thank the small and dedicated team for all their hard work, including: Mrs Jeane Nikolai, Mr. Aran McKittrick, and Ms. Patricia Deshields in the Department of Energy, in addition to Ms. Vanese Gordon who was seconded to us from the Ministry of Public Works. We look forward to the challenges of the coming year, of becoming a more forward-facing Department, of attracting business in the sectors of Energy, Telecommunications, Space and Satellite, creating opportunities for Bermudians, and lowering the costs of utilities by empowering consumers and communities.

Mr. Chairman,

With this overview of the Department and its activities, I move that the budget for Head 89 be approved.