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# **Airport Redevelopment Options – Financial Comparison**

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## Purpose

The purpose of this paper is to provide additional information to the public about the financial characteristics of various procurement options available for the Airport Redevelopment Project (the “Project”), and the benefits of the procurement option selected relative to the most viable alternatives.

This paper has been prepared by the Ministry of Finance drawing on the work of the Government of Bermuda’s (GOB) various advisors on the Project and attempts to provide both quantitative and qualitative support when comparing procurement options; however, in some cases, certain quantitative information may either be unavailable or is highly subjective or speculative, in which case it has not been incorporated.

## Key Financial Assumptions

An illustrative net present value analysis has been prepared for each of the procurement options, a Design-Build option and two different Design-Build-Finance-Operate-Maintain (“DBFOM”) options, that were identified, as well as a reference case. Key assumptions used across each of the alternatives include:

- **Discount Rate:** Bermuda long-term borrowing rate of 4.5%
- **Term:** 30-year discount term
- **Inflation:** Annual inflation of 2%

It should also be noted that this analysis assumes a deal structure based on the Airport Development Agreement (“ADA”) signed in August 2015 but also reflecting certain significant enhancements in GOB’s favour which have been negotiated and will be reflected in the final Project Agreement, but may not be public at this time. It is also important to note that while this report discusses nominal cash flows, this is merely for informational purposes. The key figure that should be used for comparison of the various options is the net present value (“NPV”) number as this takes into account the time value of money.

For reference, the various options are abbreviated as follows:

- **EBA** – Maintain Existing Terminal (Expensive Band Aid Solution)
- **DB** – Design-Build
- **DBFOM** – Design, Build, Finance, Operate, Maintain (Competitive Tender)
- **G2G** – Design, Build, Finance, Operate, Maintain (Bilateral Government to Government)

## EBA – Maintain Existing Terminal (Expensive Band Aid Solution)

The reference case presented here is one where the existing terminal is kept in operation with minimal necessary maintenance capital investment. It is important to recognize that this scenario is not viable for numerous operational risk reasons. For example, the terminal remains highly susceptible to storm surge damage and could be damaged beyond repair by a major hurricane. In addition, it should be noted that many of the existing airport structures and systems are close to or beyond the end of their intended service life. As a result, ongoing maintenance costs will escalate beyond the estimates provided here, and would merely delay the inevitable outcome where the airport will need to be replaced. As the airport is a vital link for Bermuda to the outside world, the risks associated with continuing to operate the existing terminal are exceedingly large and cannot be accurately quantified. It is for this reason that the only practical solution for the Government of Bermuda is to replace the terminal at this time of low interest rates. Nevertheless, this scenario is used as a point of reference for the various replacement options considered in the remainder of this report.

When considering a long-term maintenance scenario, there are two important categories of costs that need to be included. The first are up front costs required to make urgent near term repairs to the existing terminal as well as some improvements to the facility that are necessary to continue operations. These were estimated by GOB’s technical advisor to be \$62.3 million in repairs and \$104.8 million in improvements in a 2013 report. In addition ongoing maintenance costs need to be also included.

The relevant cash flow inputs are provided in the following table:

**Figure I. Maintain Existing Terminal Cash Flows**

Cash Flow Item	Description
Airport Operating Cash Flows (+)	- Represents net cash flows generated by the airport that would be retained by the GOB. Cash flows have been forecasted under the no revenue growth scenario. Rationale for no growth scenario is that there would be no change in the commercial, operational, or management capabilities of the airport under this option and terminal would be in poor physical condition which would hinder growth.
Borrowing Costs (-)	- GOB would need to borrow ~BD\$184 million to finance urgent near term maintenance and improvements in the first two years. We assume that this would be done through general government borrowing with no impact on GOB’s sovereign rating. Debt repayment was assumed to occur over a 30 year period in order to ensure comparability to the other scenarios. These are conservative assumptions and the costs could be substantially higher depending on the scope of the work required or increases in GOB’s cost of borrowing.
Maintenance Costs (-)	- GOB would be required to pay for maintenance costs for the airport under this option. We estimate this to be BD\$5.0 million per year based on historical capital expenditures, although the actual value would likely be much higher, and escalated at 5% per GOB’s technical advisor analysis

Based on these assumptions the following net present value analysis for the EBA reference case shows that the aggregate costs over a 30-year period would exceed \$490 million dollars with a net present value of (BD\$258) million.

Figure II. EBA – Maintain Existing Terminal Net Present Value Analysis

Illustrative Net Present Value Analysis - Maintain Existing Terminal										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2046
<b>Benefits</b>										
Airport Operating Cash Flows	4.0	4.1	4.2	4.2	4.3	4.4	4.5	4.6	4.7	7.1
<b>Net Benefits</b>	<b>4.0</b>	<b>4.1</b>	<b>4.2</b>	<b>4.2</b>	<b>4.3</b>	<b>4.4</b>	<b>4.5</b>	<b>4.6</b>	<b>4.7</b>	<b>7.1</b>
<b>Costs</b>										
Project Borrowing Costs	(14.0)	(13.7)	(13.4)	(13.2)	(12.9)	(12.6)	(12.4)	(12.1)	(11.8)	(6.2)
Maintenance Capital Costs	(5.3)	(5.5)	(5.8)	(6.1)	(6.4)	(6.7)	(7.0)	(7.4)	(7.8)	(21.6)
<b>Net Costs</b>	<b>(19.2)</b>	<b>(19.2)</b>	<b>(19.2)</b>	<b>(19.2)</b>	<b>(19.3)</b>	<b>(19.3)</b>	<b>(19.4)</b>	<b>(19.5)</b>	<b>(19.6)</b>	<b>(28)</b>
<b>NET CASH FLOWS</b>	<b>(15.2)</b>	<b>(15.1)</b>	<b>(15.1)</b>	<b>(15.0)</b>	<b>(15.0)</b>	<b>(14.9)</b>	<b>(14.9)</b>	<b>(14.9)</b>	<b>(14.9)</b>	<b>(21)</b>
<b>Total Undiscounted Cash Flows</b>	<b>(490)</b>									
<b>Net Present Value</b>	<b>(258)</b>									

It is important to stress that these numbers dramatically underestimate the true cost as they do not include any replacement capital and do not account for lost revenues or the potential broader negative economic impact on GOB as a result of the airport being damaged and non-operational. At some point GOB, would have no choice but to proceed with one of the following procurement options to construct a new terminal, possibly at a much less favourable point in the economic cycle and at a much higher cost.

## Procurement Options Considered

Against the above reference case, which again we note is not a viable long term approach, there were three primary procurement options considered for the Project. These were:

1. **DB – Design-Build:** This represents the procurement structure whereby the Government of Bermuda would involve a private sector entity by way of a competitive tender in the design and construction of the airport; however, GOB would finance the development and continue to operate/maintain the airport post-construction;
2. **DBFOM – Competitive Tender:** This option involves a private sector entity being retained on a competitive tender basis to build the new airport under a fixed-price, turnkey contract, raising the necessary financing, and operating/maintaining the airport for a 30-year period;
3. **G2G – Bilateral Government to Government:** This represents the current procurement structure being chosen by GOB. This option involves a private sector entity, in this case Aecon with support from the Canadian Commercial Corporation (“CCC”), being retained on a bilateral basis to build the new airport under a fixed-price, turnkey contract, raising financing, and operating/maintaining the airport for a 30-year period.

It should be noted that in the DBFOM and G2G scenarios where the airport is financed completely off GOB's balance sheet (i.e., GOB is not liable for repayment of the debt) require that the facility is operated by the private sector partner for at least the term of the debt, and usually for a nominal tail period beyond that (assumed to be 25 year term plus 5 year tail in this analysis). This ensures that the investors who are responsible for repaying the project debt are protected. This is in contrast to the new Acute Care Wing of the KEMH, which has no operating component and where the Government of Bermuda is fully liable for debt service.

## Procurement Option Comparison

### 1. DB – Design-Build

GOB explored this option in 2008 when it retained a third party engineering firm to develop a cost estimate of a new airport. The firm put forward a cost estimate of BD\$514 million for a new terminal. Based on the significant development costs, this option was not considered to be viable given the stress it would place on GOB's borrowing capacity. Specifically, this option would involve GOB borrowing all of the funds to finance the development of the airport which would substantially increase its sovereign debt.

In analyzing this option for the purposes of this note, the third party engineering firm's 2008 proposed costs were escalated to a 2016 equivalent value. It was further assumed that GOB would complete a value engineering exercise before tendering the Design-Build contract, which we assumed would deliver 10% savings. As a result, we assume that GOB would need to borrow \$575 million to finance the construction of the new terminal in this scenario.

This substantial increase in sovereign debt would weaken GOB's credit profile and would likely result in a credit rating downgrade by the rating agencies (degree of downgrade estimated to be at least one to two notches). The net impact result would lead to an eventual increase in borrowing costs on all of Bermuda's sovereign debt (currently BD\$2.4 billion). Furthermore, GOB would also incur the interest and principal costs associated with the debt required to finance the development of the airport. The net increase in financing costs to GOB significantly outweighs any benefits associated with this option, primarily retaining the net cash flows generated by the airport.

To complete the net present value analysis, there are several cash flow elements which must be considered:

**Figure III. DB – Design-Build Cash Flows**

Cash Flow Item	Description
Airport Operating Cash Flows (+)	- Represents net cash flows generated by the airport that would be retained by GOB. Cash flows have been forecasted under the low growth scenario based on the traffic forecast developed by an international traffic forecasting firm. Rationale for low growth scenario is that there would be no change in the commercial, operational, or management capabilities of the airport under this option; therefore, we assume a modest increase only in traffic levels

Project Borrowing Costs (-)	- GOB would need to borrow ~BD\$575 million to finance the development of the airport under this option. The airport development cost is equivalent to the proposal put forward by the third party engineering firm in the 2008 Airport Master Plan (BD\$514 million escalated by 2% inflation to 2016 less value engineering initiatives leading to a 10% reduction in cost. Cost also included BD\$20 million in development costs BD\$23 million in maintenance capex for existing terminal). <i>Note: Under the Design-Build option, the correct development cost to use is the third party engineering firm cost and not the proposal put forward by the Aecon consortium as this was the original estimate the GOB received when it engaged the private market under a design-build structure</i>
Incremental Interest Cost on Sovereign Debt (-)	- Estimated that borrowing cost for Bermuda would increase by 100bps as a result of credit rating downgrade. GOB would incur 100bps increase in borrowing costs across all sovereign debt once the various debt tranches matured
Maintenance Capital Costs (-)	- GOB would be required to pay for maintenance capital costs for the airport under this option. This has been estimated at BD\$5.0 million per year based on historical capital expenditures escalated by inflation

Based on the aforementioned elements, the following illustrative net present value analysis has been prepared. The aggregate cash outflows to GOB associated with the Design-Build option would be BD\$1,369 million and the net present value associated with this option is (BD\$797) million.

**Figure IV. DB – Design-Build Net Present Value Analysis**

Illustrative Net Present Value Analysis - Design-Build										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2046
<b>Benefits</b>										
Airport Operating Cash Flow s	8.8	7.9	7.7	8.0	8.2	8.6	8.9	9.3	9.7	28.8
<b>Net Benefits</b>	<b>8.8</b>	<b>7.9</b>	<b>7.7</b>	<b>8.0</b>	<b>8.2</b>	<b>8.6</b>	<b>8.9</b>	<b>9.3</b>	<b>9.7</b>	<b>28.8</b>
<b>Costs</b>										
Project Borrowing Costs	(50.8)	(49.7)	(48.7)	(47.6)	(46.6)	(45.5)	(44.4)	(43.4)	(42.3)	(20.2)
Incr. Interest Costs on Sovereign Debt	(2.4)	(2.4)	(4.2)	(9.2)	(9.2)	(10.6)	(15.9)	(23.4)	(23.4)	(23.4)
Maintenance Capital Costs	(5.1)	(5.2)	(5.3)	(5.4)	(5.5)	(5.6)	(5.7)	(5.9)	(6.0)	(9.1)
<b>Net Costs</b>	<b>(58.3)</b>	<b>(57.3)</b>	<b>(58.2)</b>	<b>(62.2)</b>	<b>(61.3)</b>	<b>(61.7)</b>	<b>(66.0)</b>	<b>(72.6)</b>	<b>(71.7)</b>	<b>(52.6)</b>
<b>NET CASH FLOWS</b>	<b>(49.5)</b>	<b>(49.4)</b>	<b>(50.5)</b>	<b>(54.2)</b>	<b>(53.1)</b>	<b>(53.2)</b>	<b>(57.1)</b>	<b>(63.3)</b>	<b>(62.0)</b>	<b>(23.8)</b>
<b>Total Undiscounted Cash Flows</b>	<b>(1,369)</b>									
<b>Net Present Value</b>	<b>(797.2)</b>									

One key element of the current analysis assumes that the incremental borrowing cost only increases by 100bps upon downgrade by the rating agencies. This is a fairly conservative estimate and the net present value decreases significantly as this borrowing spread widens.

## 2. DBFOM – Competitive Tender

This option would involve issuing a competitive tender for a DBFOM concession. This option was not considered to be viable as GOB would likely need to provide capital in the form of a Substantial Completion payment to ensure a financially viable project and successful competitive tender. This combined with onerous guarantees would also likely impact GOB’s sovereign credit rating and, therefore, its cost of borrowing.

Under a competitive tender process, the market would be aware of the construction price put forward by the third party engineering firm in 2008, and so this price would effectively anchor the competitive bids submitted. We also assume that GOB would use the third party engineering firm proposal as the basis for its request for proposals (“RFP”), further reducing the likelihood of significant reductions from this base capex number. As a result,

we assume bids would likely be only somewhat lower than the price put forward by the third party engineering firm (e.g. 15% - 20% lower or BD\$460 million to BD\$489 million). At this level of capex, the prevailing traffic levels could not support a standalone financing structure while maintaining competitive passenger fees. GOB would therefore be required to make significant financial contributions to the Project, likely in the form of a Substantial Completion Payment, to cover any difference in Project costs that could not be met with Project debt and equity. For reference, the substantially lower construction price proposed by Aecon in their G2G proposal results in no requirement by Bermuda to provide a capital contribution to the Project.

Due to the high construction costs associated with this option, GOB would also need to provide a much more robust revenue guarantee in order to achieve an adequate level of Project leverage required to minimize any substantial completion payment by GOB. Specifically, GOB would need to provide a guarantee on a higher regulated revenue profile which has a greater probability of payout by GOB. Moreover, it is unlikely that the current proposed “Reserve Account” approach, wherein GOB sets moneys aside as a contingency fund to support debt payments in case of a threatened default, would be achievable in a competitive tender. The guarantee would need to be a simple, market tested, direct guarantee of the project debt. The negative consequences of this are that rating agencies would consider the likelihood of payout by GOB under the guarantee to be material, given Bermuda’s 30-year history of declining air traffic, and include this in their assessment of GOB’s sovereign rating. The inclusion of any contingent liability in relation to the guarantee on GOB’s balance sheet would result in higher borrowing costs and rating agencies would either downgrade GOB’s credit rating or downgrade its outlook resulting in overall higher borrowing costs for GOB on its sovereign debt.

Another embedded cost with this option is the higher cost of project financing that would result from the contractor credit profile. The G2G option has the CCC (AAA+ rating) as the contractor/guarantor; however, the competitive procurement process would not result in a contractor with this credit quality (i.e. a rating of BBB+ or lower would be much more likely). Senior lenders would require a stronger security package in the form of letters of credit to guard against contractor non-performance risk which would increase the overall financing cost of the Project.

From a net present value perspective, there are several key elements which must be considered:

**Figure V. DBFOM – Competitive Tender Cash Flows**

Cash Flow Item	Description
Incremental Hotel Tax Revenue (+)	- With an experienced airport operator, GOB would earn additional tax revenues from tourists compared to the scenario where GOB continued to operate the airport. Specifically, passenger traffic would be higher with a private entity operating the airport which will lead to higher accommodation tax revenues compared to the status quo
Retained Government Services (-)	- Under this option, GOB would assume the retained government services similar to the G2G approach to make the deal financially viable. GOB would be required to pay for certain airport operating expenses (i.e. ATC, meteorological, ground electronics, ARFF). This has been estimated at BD\$8.8 million per year escalated by inflation
Airport Quango Annual Costs (-)	- GOB would be required to set up an Airport Quango to regulate the operations of Project Co. The cost of the Quango has been estimated at BD\$3.5 million per year escalated by inflation
Tax Concessions (-)	- Under this option, GOB is assumed to grant the same tax concessions to Project Co as under the

	G2G approach to make the Project financially viable. The value of these concessions has been estimated at BD\$50 million and have been presented at the beginning of the Project
Energy Subsidy (-)	- Under this option, GOB would assume the airport's energy consumption expense similar to the G2G approach to make the deal financially viable GOB would be required to pay for annual energy costs for the airport under this option. This has been estimated at BD\$2.6 million per year escalated by inflation
Incremental Interest Cost on Sovereign Debt (-)	- Estimated that borrowing cost for GOB would increase by 25bps as a result of either credit rating or outlook downgrade based on assumption of contingent liabilities from the revenue guarantee. GOB would incur 25bps increase in borrowing costs across all sovereign debt once the debt tranches mature

Based on the aforementioned assumptions, the following net present value analysis has been prepared. The aggregate cash outflows associated with the DBFOM – Competitive Tender option would be BD\$733 the net present value is (BD\$394) million.

**Figure VI. DBFOM – Competitive Tender Net Present Value Analysis**

Illustrative Net Present Value Analysis - DBFOM (Competitive Tender)										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2046
<b>Benefits</b>										
Incr. Hotel Tax Revenue	0.8	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	4.1
<b>Net Benefits</b>	<b>0.8</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>	<b>2.0</b>	<b>2.2</b>	<b>2.4</b>	<b>2.6</b>	<b>4.1</b>
<b>Costs</b>										
Retained Government Services	(9.0)	(9.2)	(9.3)	(9.5)	(9.7)	(9.9)	(10.1)	(10.3)	(10.5)	(15.9)
Airport Quango Annual Costs	(3.6)	(3.6)	(3.7)	(3.8)	(3.9)	(3.9)	(4.0)	(4.1)	(4.2)	(6.3)
Value of Tax Concessions	(50.0)	-	-	-	-	-	-	-	-	-
Energy Subsidy	(2.7)	(2.7)	(2.8)	(2.8)	(2.9)	(2.9)	(3.0)	(3.0)	(3.1)	(4.7)
Incr. Interest Costs on Sovereign Debt	(0.6)	(0.6)	(1.1)	(2.3)	(2.3)	(2.7)	(4.0)	(5.8)	(5.8)	(5.8)
<b>Net Costs</b>	<b>(65.8)</b>	<b>(16.1)</b>	<b>(16.9)</b>	<b>(18.4)</b>	<b>(18.8)</b>	<b>(19.4)</b>	<b>(21.1)</b>	<b>(23.3)</b>	<b>(23.6)</b>	<b>(32.8)</b>
<b>NET CASH FLOWS</b>	<b>(65.0)</b>	<b>(14.9)</b>	<b>(15.5)</b>	<b>(16.9)</b>	<b>(17.0)</b>	<b>(17.4)</b>	<b>(18.9)</b>	<b>(20.9)</b>	<b>(21.0)</b>	<b>(28.7)</b>
Total Undiscounted Cash Flows	(733)									
<b>Net Present Value</b>	<b>(393.4)</b>									

This above analysis does not take into account any potential Substantial Completion Payment required by GOB to make the Project financially viable. An estimate of the potential substantial completion payment would be highly subjective as the amount would depend on the amount of leverage that the Project could obtain taking into account the revised revenue guarantee structure. In any event, the Substantial Completion Payment would likely be in the tens of millions of dollars and further reduce the net present value of this option.

It is also important to note that this option would have a significant risk of failed procurement if no viable or compliant bids are submitted. A no-bid scenario would expose GOB to significant added costs and a minimum 3-5 year delay in the construction of a new airport terminal. During this period, maintenance costs of the existing terminal would likely sky-rocket, similar to the above EBA case, and the island's main gateway to the rest of the world would remain significantly at risk to major weather events such as hurricanes. In the past 30 years there have been no successful DBFOM competitive tender deals done for an airport with less than 1 million passengers p.a., as is the case with Bermuda.

### 3. G2G – Bilateral Government to Government

This option is the current procurement option being pursued by GOB and it results in the highest net present value compared to the other viable options. Again, the EBA case is not considered as a viable long term solution.

There are several key benefits associated with this approach such as the CCC guarantee, ability to customize the deal and limited impact to GOB’s sovereign finances. Overall, this procurement approach results in significant savings to the Bermuda government compared to the other procurement options. Furthermore, the value created under this approach, including a more customized solution taking into account all of Bermuda’s requirements, is substantial relative to the tendered DBFOM approach. We further note that this negotiated approach is anticipated to have numerous other benefits and protections for Bermuda. These include employment and labour guarantees, sharing of upside revenues above a minimum base case threshold, and so on. Moreover, Aecon has conducted many of the studies that GOB would have needed to complete in advance of a competitive tender (e.g., geotechnical investigations) in parallel with the negotiations resulting in a significant time savings.

From a strict net present value perspective there are several key elements which must be included:

**Figure VII. G2G – Bilateral Government to Government Cash Flows**

Cash Flow Item	Description
Incremental Hotel Tax Revenue (+)	- With an experienced airport operator, GOB would earn additional tax revenues from tourists compared to the scenario where GOB continued to operate the airport. Specifically, passenger traffic would be higher with a private entity operating the airport which will lead to higher accommodation tax revenues compared to the status quo
Retained Government Services (-)	- GOB would be required to pay for certain airport operating expenses (i.e. ATC, meteorological, ground electronics, ARFF) under this option. This has been estimated at BD\$8.8 million per year escalated by inflation
Airport Quango Annual Costs (-)	- GOB would be required to set up an Airport Quango to regulate the operations of Project Co. The cost of the Quango has been estimated at BD\$3.5 million per year escalated by inflation
Tax Concessions (-)	- GOB has granted several tax concessions to Project Co. The value of these concessions has been estimated at BD\$50 million and have been presented at the beginning of the Project
Energy Subsidy (-)	- GOB would be required to pay for annual energy costs for the airport under this option. This has been estimated at BD\$2.6 million per year escalated by inflation

Based on these inputs, the following illustrative net present value analysis has been prepared. The aggregate cash outflows to GOB associated with the G2G option would be BD\$585 million and the net present value is (BD\$322) million.

**Figure VIII. G2G – Bilateral Government to Government Net Present Value Analysis**

**Illustrative Net Present Value Analysis - G2G (Bilateral Government to Government)**

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2046
<b>Benefits</b>										
Incr. Hotel Tax Revenue	0.8	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	4.1
<b>Net Benefits</b>	<b>0.8</b>	<b>1.2</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>	<b>2.0</b>	<b>2.2</b>	<b>2.4</b>	<b>2.6</b>	<b>4.1</b>
<b>Costs</b>										
Retained Government Services	(9.0)	(9.2)	(9.3)	(9.5)	(9.7)	(9.9)	(10.1)	(10.3)	(10.5)	(15.9)
Airport Quango Annual Costs	(3.6)	(3.6)	(3.7)	(3.8)	(3.9)	(3.9)	(4.0)	(4.1)	(4.2)	(6.3)
Tax Concessions	(50.0)	-	-	-	-	-	-	-	-	-
Energy Subsidy	(2.7)	(2.7)	(2.8)	(2.8)	(2.9)	(2.9)	(3.0)	(3.0)	(3.1)	(4.7)
<b>Net Costs</b>	<b>(65.2)</b>	<b>(15.5)</b>	<b>(15.8)</b>	<b>(16.1)</b>	<b>(16.5)</b>	<b>(16.8)</b>	<b>(17.1)</b>	<b>(17.5)</b>	<b>(17.8)</b>	<b>(27.0)</b>
<b>NET CASH FLOWS</b>	<b>(64.4)</b>	<b>(14.3)</b>	<b>(14.4)</b>	<b>(14.6)</b>	<b>(14.7)</b>	<b>(14.8)</b>	<b>(14.9)</b>	<b>(15.1)</b>	<b>(15.2)</b>	<b>(22.9)</b>
Total Undiscounted Cash Flows	(585)									
Net Present Value	(322.0)									

The above analysis does not account for additional factors which cannot be reasonably valued such as the revenue sharing regime.

To summarize, the key benefits of value added from this approach are listed below.

## Key Benefits Of A G2G – Bilateral Government to Government Approach

There are five primary benefits derived from the G2G approach relative to the other options procurement options considered:

- Potential for Failed Procurement:** From a qualitative perspective, the DBFOM option exhibits a higher degree of risk compared to the G2G approach. First, GOB would need to develop a detailed Request for Proposal (“RFP”) which would invite prospective parties to submit bids. The development of a RFP involves significant upfront cost to GOB (BD\$10 million+) (associated with the cost of advisors, technical studies, etc.) and there is no certainty that the approach will lead to a successful procurement. Specifically, there would be a risk that either no parties bid on the RFP or bids were unacceptable to GOB, in which case GOB would have spent BD\$10 million+ with no tangible results. Moreover, typical procurements in most jurisdictions compensate non-successful bidders for a portion (i.e. 50%) of their bid costs (honorarium) which would be an additional out-of-pocket cost to GOB and could be material based on the number of parties shortlisted. These risks are accepted in Canada, the United States or United Kingdom as these jurisdictions have much larger federal/provincial budgets and significant pipelines of P3 projects across which this risk is distributed and therefore mitigated. The impact of foregoing millions of dollars due to a failed procurement is not as material to these countries as it would be to Bermuda.
- Bespoke Solution:** Another key difference between the DBFOM and the G2G approaches is the degree of customization which can be achieved. Specifically, under the tendered approach, parties would simply bid on the specifications as put

forward in the RFP developed by GOB which would need to select the best option. GOB could include revenue sharing and other beneficial features in the RFP, but would thereby further increase the risk of a no-bid failed procurement. The value of customization cannot be easily valued but is considered to be substantial.

- **Construction Price:** It is difficult to predict with certainty the relative construction price under the tendered approach relative to the bilateral approach. We assumed the most likely scenario, a bid construction price 15% to 20% lower than the amount proposed by HNTB in 2008, after including escalation and assuming value engineering benefits. Aecon from the outset recognized that this level of expenditure was not financially viable and has proposed a minimum cost solution that would meet the needs of Bermuda. As a result, the G2G approach has brought significant value to the process through a greatly reduced construction price ameliorating the required financial contributions by Bermuda.
- **Contractor Creditworthiness:** The G2G approach provides the Project with the full faith and credit of the Canadian Government (AAA+) backing the fixed-price, turnkey construction contract. This robust support substantially reduces the risk of non-performance by the contractor and insulates GOB from the credit risk of the contractor. This element would not be present in the tendered approach as this was unique to the G2G option. Additionally, this results in lower debt financing costs for the Project as lenders will have greater comfort in CCC relative to another contractor and will require a less restrictive security package.
- **Bermuda Credit Rating:** The bilateral negotiations have led to significantly more attractive terms for GOB than were contemplated at the start of negotiations with CCC and Aecon, or that would have been achievable in a tendered DBFOM model. It is important to keep in mind that Bermuda has a limited Public-Private Partnership track record and a 30 year history of declining air traffic levels. As a result, GOB was able to eliminate, through extensive negotiations, several typical elements of a DBFOM deal such as the Substantial Completion payment and firm traffic guarantee discussed above. An unintended consequence of such a firm guarantee would have been GOB also guaranteeing a minimum equity return to the developer – an undesirable outcome that is avoided in the G2G model.

A summary of the impact on these aforementioned factors on net present value are presented below:

**Figure IX. Additional Value brought by G2G – Bilateral Government to Government Approach**

Factor	Description	Relative Value Brought by Bilateral Approach
Potential for Failed Procurement	- GOB is not exposed to the risk of a failed procurement which could result in the loss of millions of dollars. Furthermore, GOB is not required to pay a portion of each bidding party's development costs which is millions of dollars	▲
Bespoke Solution	- Additional value brought to the Project through customization (e.g. revenue sharing line, minimum revenue guarantee, etc.) that would not be included in tendered approach	▲

Construction Price	- Construction price put forward by Aecon would be lower than the price under a competitive tender. As a result, financial contributions by GOB would be less	▲
Contractor Creditworthiness	- Contractor is of higher credit quality under the G2G approach which would decrease the financing costs (e.g. LCs required) of the Project	▲
Bermuda credit rating	- The direct revenue guarantee and substantial completion payment that would likely be required in the tendered approach have been successfully avoided in the G2G negotiations	▲

Based on this analysis we conclude that the G2G approach was financially the most beneficial solution available to Bermuda.