



U.S. Department
of Transportation
**Federal Aviation
Administration**

Memorandum

Subject: **ACTION:** Program Guidance Letter 12-01

Date: **OCT 28 2011**

From: Manager, Airports Financial Assistance Division,
APP-500 

Reply to
Attn. of: Dennis Walsh
202-493-4890

To: PGL Distribution List

12-01 Revised BCA Guidance

The benefit cost analysis (BCA) is an important tool FAA uses for evaluating the financial considerations of investing in selected airport capacity projects. This PGL announces new guidance regarding a key change to the FAA's BCA policy, "*Federal Aviation Administration Policy and Final Guidance Regarding Benefit Cost Analysis (BCA) on Airport Capacity Projects for FAA Decisions on Airport Improvement Program (AIP) Discretionary Grants and Letters of Intent (LOI)*" dated December 15 1999.¹

FAA is modifying its policy requiring benefit cost analyses (BCA) when applying for AIP grants for certain capacity projects.

This modification raises the point at which a BCA is required from \$5 million to \$10 million in requested AIP Discretionary funds over the life of the project, including all enabling or related project elements.

In addition, the FAA may elect to require a BCA for projects with lower Discretionary funding levels in order to evaluate the reasonableness of project costs relative to project benefits. Projects excluded from the BCA requirement must still comply with existing AIP statutory requirements and eligibility and justification criteria.

Further clarifications of the definition of capacity projects and the dollar amounts for which the BCA requirement is imposed will be included in FAA's revision to the AIP Handbook, FAA Order 5100.38C, scheduled for issuance in 2012.

This revised guidance is being issued after an evaluation was conducted on the application of the current BCA requirements. A discussion of the evaluation and results is included in the PGL to also inform FAA staff, airport sponsors, consultants and the public about the basis for this decision (see Attachment 1:

¹ http://www.faa.gov/airports/resources/publications/federal_register_notices/media/aip_64fr70107.pdf

Benefit Cost Analysis Threshold Evaluation). The modifications established in this guidance will be effective on the date of this PGL.

FAA staff, airport sponsors and consultants are reminded that BCA's must be prepared and submitted early enough to allow sufficient time for FAA review and approval prior to awarding any grant (including design-only grants) in connection with a proposed capacity project, even if initial phases of the project do not trigger the BCA threshold for AIP Discretionary funding requests. The threshold is based on total expected AIP Discretionary funding requests over the life of the project.

FAA staff, airport sponsors and consultants are also reminded that preliminary BCA's should be conducted early enough in the planning process to identify reasonable alternatives in case project benefits cannot reasonably be expected to exceed project costs.

Finally, FAA staff, airport sponsors and consultants are reminded that the purpose of the threshold is solely to determine whether a BCA is required for a particular project. BCA's must consider the full costs of the project, consistent with the FAA's published BCA guidance.

NOTE: The FAA also reminds all interested parties of the release of an Airport Cooperative Research Program (ACRP) synthesis titled, "Effective Practices for Preparing Airport Improvement Program Benefit-Cost Analysis", dated June 2009.² The information gathered from the BCA synthesis is to be used in conjunction with "FAA's Airport Benefit Cost Analysis Guidance", dated December 15, 1999.³ The 1999 BCA document provided detailed guidance to airport sponsors on the conduct of project-level BCA. The recent ACRP synthesis work focused on a review of benefit-cost literature, including benefit-cost analyses submitted to the FAA since 1999, and structured interviews with airport managers and other applicants, consultants who prepared BCA studies, and FAA staff. The study highlighted benefit assessment and cost estimating techniques. The lessons learned and shared in the synthesis may be adopted in future development of BCAs.

In addition, the synthesis research replaces the FAA document titled, "*Incorporation of Benefit Cost Analysis Procedures into the Airport Planning Process (Draft)*", dated August 22, 2003. Even though this document was not made part of official FAA guidance, it was previously used as a best practices guide to assist FAA Airports' staff in offering guidance to sponsors on developing BCAs and in reviewing draft BCAs submitted by sponsors. The ACRP synthesis work provides an updated discussion of the processing methods and evaluation techniques for BCAs submitted to FAA for review.

² http://www.trb.org/Publications/Blurbs/Effective_Practices_for_Preparing_Airport_Improvem_161751.aspx

³ http://www.faa.gov/regulations_policies/policy_guidance/benefit_cost/media/1999_FAA_Airport_Benefit_Cost_Analysis_Guidance.pdf

Benefit Cost Analysis Threshold Evaluation

Background.

In 1994, FAA established its policy on Benefit Cost Analysis (BCA) requirements for airport capacity projects. FAA initially used \$10 million in AIP Discretionary funds as the threshold for requiring a BCA. FAA implemented its BCA policy in response to both Executive and Legislative requirements for justifying expenditures of public funds through investment criteria. Factors leading to the BCA requirement included:

- a. The need to improve the effectiveness of Federal airport infrastructure investments in light of a decline in Federal AIP budgets;
- b. Issuance of Executive Order 12893, [“Principles for Federal Infrastructure Investments”](#) (January 26, 1994);¹
- c. Guidance from Congress citing the need for economic airport investment criteria; and
- d. Statutory language from 1994 included in section 47115 (d) of the Title 49, United States Code, chapter 471, subchapter I, specifying that in selecting projects for discretionary grants to preserve and enhance capacity at airports, the Secretary shall consider the benefits and costs of the projects (See 49 U.S.C. [§ 47115 “Discretionary Fund”](#)).

Neither Executive Order 12893 nor 49 U.S.C. § 47115(d) established a minimum threshold for BCA reviews. Therefore, the FAA instituted a \$10 million threshold policy to help ensure that costs likely to be incurred in preparing a BCA would be reasonable with respect to the value of the grant funds being requested. The \$10 million threshold was also the same value at which FAA must notify Congress prior to the issuance of Letter of Intent (LOI) awards.

In 1997, FAA implemented a new BCA policy which transferred the responsibility of conducting the BCA from FAA to the sponsor. In addition, the policy lowered the dollar threshold to \$5 million, citing three reasons related to Executive Order 12893, technical feasibility of lowering the threshold, and workload considerations.

The change to the \$5 million level threshold was made policy in 1997 and formalized in a 1999 Federal Register notice, *Federal Aviation Administration Policy and Final Guidance Regarding Benefit Cost Analysis (BCA) on Airport Capacity Projects for FAA Decisions on Airport Improvement Program (AIP)*

¹ http://www.faa.gov/airports/aip/bc_analysis/media/eo_12893.pdf

Discretionary Grants and Letters of Intent (LOI), 64 Fed. Reg. 70107 (December 15, 1999).²

Since 1997, policy has required sponsors to conduct BCAs for capacity projects where \$5 million in AIP Discretionary funding will be requested. In developing the interim guidance for increasing the threshold, FAA reviewed the reasons why the BCA amount was lowered in 1997 and concluded that the former reasons do not present a sufficient basis to warrant maintaining the \$5 million level threshold today.

FAA has gained valuable experience assessing the implementation of the policy and the need to further clarify the threshold requirements for BCA. The \$5 million threshold amount has remained unchanged for almost 13 years while the cost of construction has risen significantly. In addition, the lower threshold has required both FAA and sponsors for non-primary and non-hub primary airports to devote substantial financial and staff resources in preparing and evaluating BCAs for relatively small projects with readily apparent capacity benefits.

Escalation of Construction Costs

FAA compared the value of \$5 million (current BCA threshold) in 1997 dollars against the value of \$5 million in today's dollars. Based on the consumer price index, the amount of price inflation has increased about 41% since 1997.³ Using that increase, the value of \$5 million in 1997 would be equivalent to about \$6.8 million today. But construction costs, especially costs for material such as steel, concrete, and asphalt, have risen higher than the general rate of inflation.

Since we were unable to locate construction cost data specific to airport construction, we relied upon highway and street construction data that was tracked through the Bureau of Labor and Statistics (BLS). This data was tracked through 2010 and has since been replaced by a newly added index for material and supply inputs for other new nonresidential construction (BONS). The BONS index encompasses activities that previously were categorized under material and supply inputs to highway and street construction and other heavy construction. Examples of construction activities that would fall under BONS include water and sewer lines and related construction; oil and gas pipelines and related construction; power and communication line and related construction; highway, street, and bridge construction; and airport runway, dam, dock, tunnel, and flood control construction. This data provides a reasonable approximation of heavy civil infrastructure costs in general, and therefore, best captures the dynamics of construction cost increases.

² http://www.faa.gov/airports/resources/publications/federal_register_notices/media/aip_64fr70107.pdf

³ http://inflationdata.com/Inflation/Inflation_Rate/InflationCalculator.asp#results

Based on the latest BLS data (August, 2011), \$5 million of costs in 1997 is equivalent to \$9.6 million today (see Exhibit A). As calculated, the cost of construction has risen significantly over the last 13 years yet there has not been any corresponding increase in the BCA threshold. It is noted that the escalation of costs have almost reached the \$10 million level (in current dollars); nevertheless, a threshold increase to \$10 million should negate the need to revisit the threshold issue again for a number of years

Conclusion

FAA's evaluation established that construction costs have increased significantly since FAA's BCA policy was introduced in 1997. Considering the reasons justifying why the BCA amount was lowered in 1997 together with the impacts of these increases, we conclude that increasing the dollar threshold for requiring a BCA to \$10 million would ensure the same level of confidence that FAA has in making investment decisions for certain capacity projects. In addition, the \$10 million amount is a reasonable threshold as it is the same value at which FAA must notify Congress prior to the issuance of LOI awards. Therefore, the current BCA threshold of \$5 million is being increased to \$10 million. FAA retains the right to require a BCA for any project, in order to evaluate the reasonableness of project costs relative to project benefits. Additionally, FAA invited airport sponsors and other interested parties to comment on the December 16, 2010, interim guidance increasing the BCA threshold. FAA responded to various comments in the Federal Register dated, October 24, 2011, and considered those comments when promulgating the final BCA guidance for airport sponsors.⁴

Moreover, FAA's Office of Airport Planning and Programming will continue to evaluate the BCA program so that the application of the policy continues to meet the intent of the Executive Order and legislative BCA requirements. In addition, APP will monitor the effectiveness of the BCA requirements to help ensure the proper use of discretionary funds

⁴ Documents are available on Airport's Division website at http://www.faa.gov/airports/aip/bc_analysis/

Calculations of Construction Cost Increases

Data extracted on: May 4, 2010 (4:07:46 PM)

Producer Price Index Industry Data

Series Id: PCUBHWY--BHWY--

Industry: Material and supply inputs to highway and street construction

Product: Material and supply inputs to highway and street construction

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1997	58.0	58.0	57.8	57.8	57.9	57.9	57.8	58.1	58.1	58.1	58.1	57.8	57.9
1998	57.6	57.4	57.2	57.5	57.7	57.6	57.7	57.4	57.5	57.5	57.3	56.9	57.4
1999	57.1	57.0	57.3	58.3	58.6	58.6	59.0	59.6	60.0	59.9	60.3	60.8	58.9
2000	61.4	62.3	63.3	63.1	63.2	64.0	63.8	63.5	64.6	64.4	64.4	63.9	63.5
2001	64.1	64.3	63.9	64.4	65.1	64.6	63.5	63.7	64.4	63.0	62.4	61.6	63.7
2002	61.8	61.6	61.7	62.0	62.2	62.3	62.4	62.4	62.5	62.5	62.3	62.2	62.2
2003	62.7	63.1	63.6	63.8	63.7	63.7	63.6	63.7	63.6	63.6	63.8	63.8	63.6
2004	65.3	65.7	66.3	67.5	68.8	68.4	69.4	70.0	70.6	72.3	72.3	70.7	68.9
2005	71.8	72.8	74.6	75.8	75.5	76.1	78.0	79.1	81.9	84.1	80.5	80.7	77.6
2006	82.6	81.8	83.4	86.2	87.4	88.6	89.2	89.7	86.5	85.2	85.1	85.6	85.9
2007	85.2	86.1	88.4	90.5	91.9	91.5	93.0	91.1	91.9	91.9	95.3	94.3	90.9
2008	95.2	95.8	99.4	101.6	105.7	109.0	113.3	111.3	112.1	105.5	98.6	93.7	103.4
2009	94.4	92.7	92.2	93.4	94.9	97.1	95.9	97.2	96.8	96.5	97.4	97.4	95.5
2010	98.8	98.4	100.0										

Data extracted on: August 23, 2011 (7:59:41 AM)

Producer Price Index Industry Data

Series Id: PCUBNON--BNON--

Industry: Non-residential construction

Product: Non-residential construction

Base Date: 201006

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2010						100	99.9	100.3	100.1	100.7	101.2	102	
2011	103.6	104.8	107.5	109.3(P)	110.8(P)	110.4(P)	110.8(P)						

P : Preliminary. All indexes are subject to revision four months after original publication.

Date	BLS Index	% increase
Jun-97	57.9	
Jul-11	110.8	91.36%

Percent rise in construction costs from June 1997 to July 2011 = 91.36%

Date	Equivalent Construction Cost
Jun-97	\$5,000,000
Jul-11	\$9,568,221

Source: <http://stats.bls.gov/ppi/data.htm>

Industry Data (PPI): One screen Data Search