STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Maine Turnpike Authority Natural Resources Protection Act Site Location of Development Act York Tollbooth Replacement L-27241-TG-A-N L-27275-TP-A-N	))))))	INTERVENOR'S POST-HEARING BRIEF

INTRODUCTION AND RELEVANT FACTS

The Maine Turnpike Authority ("MTA" or "the Applicant") has submitted a permit application for NRPA and Site Law approval of a proposed "Open Road Tolling" ("ORT") toll facility to replace the existing York tollbooth. As evidenced by the need for a NRPA permit, the ORT facility will require the filling of wetlands. The Intervenor, Coalition for Responsible Toll Collection ("CRTC") contends that an "All Electronic Tolling" ("AET") facility is a practicable alternative to the ORT facility, and all parties agree that an AET facility will not result in any wetland impacts. Thus, the central issue in this proceeding is whether the AET facility proposed by the Intervenor is a "practicable" one.

Benefits and Challenges of ORT and AET Facilities

The ORT facility proposed by MTA combines both high speed lanes in which the toll is collected from the E-ZPass transponders in the drivers' cars, and traditional cash lanes. An AET facility omits the cash lanes, and for non-E-ZPass users, high speed cameras read the driver's license plate number, and an invoice is sent to the driver by mail. This is the so-called "pay-by-plate" system.

There are benefits and challenges to each alternative. An ORT is a large facility, expensive to construct and maintain. MTA's 2014 construction cost estimate was $36 million, and the actual cost will be higher today. (MTA Pre-Filed Test., Ex. B, p. ES-2 (2014 CDM

Smith Study, hereinafter "2014 Study")). In contrast, an AET facility, which consists only of a gantry structure spanning the highway, would cost $4.5 million, and MTA predicts that over time O&M costs for an AET facility would be lower than for ORT.[1] (2014 Study, p. 21, Table 5 and 6, "Total Annual AET/ORT M&O Costs").

AET facilities also present challenges, specifically with collecting tolls by mail. This is referred to as "leakage," and includes errors in capturing license plate information, difficulty in obtaining mailing addresses from out-of-state drivers, and the simple refusal of some drivers to pay when invoiced. AET facilities often require surcharges, or additional fees imposed on pay-by-plate drivers to cover the cost of processing invoices, and to account for leakage. These surcharges result in higher tolls for cash customers, which can lead to "diversion," or cash customers leaving the toll road to avoid the surcharge.

MTA's 2014 Alternatives Analysis

MTA has the burden to show that no upland alternative is practicable, and evidence to meet this burden must be found in the record of this proceeding. MTA determined that an AET facility was not practicable based solely on a 2014 feasibility study by CDM Smith. (Hearing Transcript ("Trans.") p. 48, line 24 to p. 49, line 4; p. 147, line 21 to p. 148, line 1).[2] In this study, CDM Smith evaluated all financial and operational aspects of an ORT and AET facility, including MTA's conservative estimates for leakage and diversion. (2014 Study pp. 21-22,

[1] MTA concedes that O&M costs for an AET facility are lower than ORT, even taking into consideration the "back-office" expenses of hiring staff to process invoices and payments for the pay-by-plate users. Thus, all of the concerns raised by MTA in this proceeding about the cost of back-office operations are a distraction—MTA has already considered these costs, and it is undisputed that it is less expensive to build and operate an AET facility. (2014 Study, pp. 21-22, Tables 5 and 6).

[2] MTA has included a prior 2009 analysis of AET in its application, suggesting that it also relied on that study in rejecting AET. (MTA Pre-Filed Test., Ex. A). During the hearing, however, the author of that study testified that many of his assumptions were out-of-date when MTA voted in 2014 to reject AET, and that MTA relied exclusively on the CDM Smith 2014 Study. (Trans. p. 147, line 21 to p. 148, line 1).

Tables 5 and 6). CDM Smith also included capital costs and ongoing O&M expenses. (2014 Study p. 47, Table 16). It then presented data comparing how each type of new facility would compare, over a 16-year period, to the option of maintaining the existing York tollbooth. (*Id.*).

After considering all of these factors, and calculating its financial predictions to the so-called "90% confidence level," CDM Smith predicted that over the first 10-year period of tollbooth operation, an ORT facility was likely to result in $6.6 million dollar revenue shortfall as compared to continued operation of the existing York tollbooth. (2014 Report p. 47, Table 16). In contrast, CDM Smith predicted that over the same 10-year period an AET facility was 90% likely to generate a revenue surplus of $1.5 million. (*Id.*) As such, when compared against each other, an AET facility would result in a relative financial benefit to MTA of approximately $8 million.

Further, this $8 million revenue surplus with AET assumed the replacement tollbooth would be operational in January of 2015, as CDM Smith's 10-year period was calculated from 2015 to 2024. In fact, at the time, the MTA knew that the new tollbooth would not commence operations in 2015. (Trans. p. 29, lines 8 to 21). MTA had conducted its evaluation of the new York tollbooth in 2014 because it was considering improvements and upgrades to other toll facilities, and determining the design of MTA's largest and most important tollbooth, in York, was important in making plans about other facilities. (Trans. p. 62, lines 7-13). In other words, MTA evaluated the relative financial performance of AET and ORT years before it intended to actually file applications for permits or construct the new York tollbooth.[3]

This is a critical point, as CDM Smith predicted (correctly) that each year from 2015

[3] During the hearing Peter Mills testified that in July of 2014 the MTA Board believed that it was feasible to implement a "pilot" AET facility in Gardiner as early as January of 2015, but that it was not feasible to implement an ORT facility by 2015. (Trans. p. 29 lines 8-21).

going forward the percentage of E-ZPass users would increase.[4] As more drivers use E-ZPass, the financial downside to AET shrinks, as there is less diversion and less leakage. Thus, the longer the MTA waited to build, the better the financial predictions from CDM Smith.

Although CDM Smith did not provide the 90% confidence net revenue figure for any 10-year period except 2015-2024, a review of the 50% confidence numbers (shown on Table 5 of the 2014 Study) shows that numerous financial factors get better with an AET facility each year. For example, net revenue losses of an AET facility, as compared to the existing facility, end starting in 2019. (2014 Report p. 21, Table 5, line "Total Net AET Toll Revenue Impact"). Further, the losses due to "toll and technology diversion" drop each year, from the 3,400 per day in 2015 cited by MTA in rejecting AET, to 2,320 per day five years later. (*Id.*) Maintenance and Operation costs also go down each year, and all of these trends benefit AET, and they occur because more and more drivers are predicted to use an E-ZPass. (*Id.*).

This means that if in 2014 MTA had asked CDM Smith to calculate a 10-year comparison based on the actual first ten years of tollbooth operation—starting in 2017 or 2018—the predicted $8 million surplus would have been even higher.[5] Thus, by using a 10-year study period that MTA knew did not represent the actual first ten years of tollbooth operations, the MTA underestimated the financial benefits of AET.

The 2014 Study is Out-of-Date

Finally, a larger problem complicates MTA's reliance on the 2014 Study. MTA did not

[4] Mr. Mills testified that E-ZPass use has risen from 59 or 60% when he arrived at MTA to approximately 72% today. (Trans. p. 17, lines 12-15).

[5] The author of the CDM Smith study, Gary Quinlan, admitted during the hearing that if he had been asked to run a 10-year comparison starting in 2017 or 2018 the "surplus" revenue generated by an AET facility would have been even higher. (Trans. p. 97 lines 17-25; p. 98 lines 1-9). Mr. Mills also understood that if CDM Smith's 10-year analysis had used a later start date the study "would produce a larger number" for the AET revenue surplus. (Trans. p. 47, line 23 to p. 48, line 6).

conduct its alternatives analysis for the new York tollbooth in 2014 because it was preparing applications for permits to construct the new tollbooth. Instead, it conducted its alternatives analysis for the York tollbooth in 2014 because at that time MTA believed it needed to decide whether to discontinue cash collection at other tollbooths scheduled for immediate construction. (Trans. p. 51, line 23 to p. 52, line 1). Indeed, MTA waited two years after concluding its alternatives analysis before even filing applications with the Department and the Army Corps, and MTA has conceded that the new tollbooth will not be operational until 2019 or 2020. (NRPA Application, Appendix 2G, p. 4 (noting anticipated operation date of 2019)).

Given the passage of time between the MTA's 2014 alternatives decision and the actual date of tollbooth operation, both MTA and CDM Smith testified that the 2014 Study is outdated, and can no longer be used to predict the relative financial performance of either an AET or ORT facility commencing operations in 2019 or 2020. (Trans. p. 50, lines 13-23; p. 121, lines 14-19). MTA's alternatives analysis, therefore, took place years too soon, long before MTA even intended to file an application for permits for the new facility. As such, the 2014 Study can no longer support any alternatives decision necessary for MTA to meet its statutory burden in this proceeding.[6]

As discussed below, the Department should find that MTA has not met its burden of showing that AET, an admitted upland alternative, is not a practicable alternative to the ORT facility proposed in the applications.

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[6] Even prior to the hearing MTA had informed the Department that the 2014 Study could no longer be used to support an alternatives analysis for a tollbooth commencing operations in 2019 or later. (May 8, 2017 letter from P. Mills to Attorney Tourangeau). CRTC has repeatedly pointed out that MTA must update the 2014 Study, and it moved to strike the 2014 Study from the record of this proceeding based on testimony by Mr. Mills and Mr. Quinlan. (Trans. pp. 132-134). MTA was given the option to update the study but declined, and without a valid 2014 Study, or an updated study, MTA's 2014 alternatives analysis is legally deficient.

ARGUMENT

A. MTA HAS THE BURDEN TO SHOW THAT NO UPLAND ALTERNATIVE EXISTS TO ITS PROPOSED OPEN ROAD TOLLING FACILITY.

The Department regulations require a permit applicant proposing to fill wetlands to analyze alternatives to the proposed activity and "demonstrate that a practicable alternative does not exist" that would avoid the wetland impacts. *Kroeger v. Dep't of Envtl. Prot.*, 2005 ME 50, ¶ 17, 870 A.2d 566, 571. "Practicable" is defined as "[a]vailable and feasible considering cost, existing technology and logistics based on the overall purpose of the project." Ch. 310(3)(R). The burden is on MTA to show that AET, an upland alternative that avoids all wetland impacts, is not a practicable alternative. *See Kroeger*, 2005 ME 50, ¶ 9, 870 A.2d at 569.

B. MTA HAS CONCEDED THAT THE 2014 CDM SMITH STUDY CANNOT SUPPORT AN ALTERNATIVES ANALYSIS FOR A TOLLBOOTH COMMENCING OPERATIONS IN 2019 OR 2020.

As noted above, MTA has admitted that the sole study in support of MTA's alternatives analysis, the 2014 Study, can only support an alternatives decision for a tollbooth commencing operations in 2015. MTA concedes that the new tollbooth will not be operational until 2019 or 2020. In response to the Intervenor's request to update the "ten-year" calculation of financial impacts of AET and ORT given the change in the construction schedule, Mr. Mills and Mr. Quinlan both testified that the 2014 Study cannot be used for such an analysis. (Trans. p. 50, lines 14-24; p. 121, lines 14-19). Mr. Quinlan was emphatic about the timing issue, and testified that because so many of the data variables change over time, for the 2014 Study to have any value, the data must have been considered close in time to actually constructing and operating the new tollbooth. (Trans. p. 143, lines 3 to 15).

Mr. Mills raised the same objections prior to the hearing in letters he submitted to the DEP. MTA contends that in order to adequately assess the relative financial performance of an

AET or ORT facility commencing operations in 2019 or later, the MTA would have to update the data in the model and re-run the predictions over a new 10-year period. (P. Mills May 8, 2017 letter). In other words, while the 2014 study could have been used for an alternatives analysis for a tollbooth commencing operations in 2015, it cannot be used to evaluate a facility opening in 2019 or 2020.[7]

MTA appears to believe that it can conduct an alternatives analysis years before it even intends to file a permit application, and reject otherwise feasible upland alternatives based on data and assumptions that will never be relevant to any actual project. If that was the case, an applicant for a NRPA permit could engage in a theoretical alternatives analysis whenever the existing data favored its chosen alternative, even if that was several years before it intended to file an application for a permit.[8]

Such an argument is even more disturbing in this proceeding, as MTA knew, in 2014, that the financial case for AET would improve each year. Thus, if MTA preferred an ORT facility for any reason, it had to conclude its alternatives analysis immediately. Otherwise, its predicted increases in E-ZPass use, and the corresponding drop in leakage and diversion, would shift the data in favor of AET such that it would be nearly impossible to convince the

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[7] In his letters and during the hearing, Mr. Mills argued that some recent data suggests AET is a less viable option, in particular increases in E-ZPass use that are below what Mr. Quinlan predicted in 2014. Mr. Mills' attention to one factor, while ignoring all others, does not pass for the reassessment that is necessary before MTA could even offer an opinion as to whether AET is a practicable alternative. Mr. Quinlan admitted that MTA has not reviewed all of the factors that CDM Smith considered in the 2014 Study, and thus cannot say anything definitive about the relative financial impacts of any tollbooth that will actually be constructed. (Trans. p. 118, line 22 to p. 120, line 15).

[8] MTA has repeatedly suggested that the scope of wetland and other resource impacts associated with its ORT facility are minor. That is irrelevant to the alternatives requirement in Chapter 310. Further, MTA's implied legal theory, that the alternatives analysis may be conducted years before an applicant intends to apply for permits and construct a project, would apply equally to projects with far more significant wetland impacts. This is not how the Chapter 310 rules are meant to be interpreted.

Department later on that AET was impracticable. This explains why MTA has fought any suggestion that it should revise and update the 2014 Study. Regardless of any small differences in how fast E-ZPass use has increased, it has increased, and MTA knows that if it updates the CDM Smith study, the relative financial benefit of AET will far exceed the $8 million predicted in 2014, and the sky-is-falling predictions of leakage and diversions will drop precipitously.[9]

An alternatives analysis must be supported by studies or data or some information justifying the rejection of an upland alternative. *See Kroeger*, 2005 ME 50, ¶ 18, 870 A.2d at 572 (alternatives test requires applicants to provide the department with evidence in support of its analysis). MTA has testified that both of the AET alternatives studies, the 2014 CDM Smith study and the 2009 HNTB study, are invalid, each because the data and conclusions contained in these reports is outdated. As such, there is no competent evidence in the record to support MTA's alternatives analysis.

Although MTA refused to update the 2014 Study, applicants must update alternatives analyses if there have been significant changes in the factors that supported a prior alternatives decision. *See Alliance to Save the Mattaponi v. U.S. Army Corps of Engineers*, 606 F. Supp. 2d 121, 125 (D.D.C. 2009) (changes in applicant's need and data calculations between date of filing application and anticipated date of issuance of permit required an update to the alternatives analysis). In this case, MTA has conceded that regardless of whether the 2014 CDM Smith report adequately supported its decision in 2014 to reject AET, the report is now useless to

[9] It is important to note that, by statute, the MTA cannot be terminated, and its operations transferred to the Department of Transportation, unless and until all bonds are repaid. *See* 23 M.R.S.A. § 1978(2). Thus, when presented with a capital-intensive alternative that requires significant borrowing (ORT) and a much less expensive construction project (AET), MTA has an institutional interest in selecting the alternative that requires long-term borrowing and indebtedness. An applicant's institutional interests, however, are not relevant to whether an upland alternative meets the project purpose.

support an alternatives analysis for the actual project proposed by MTA.[10]

For this reason the Department should find that MTA has failed to meet its burden of showing that no practicable upland alternative exists, and the Department should deny MTA's request for a NRPA permit.

C. EVEN IF THE 2014 STUDY WAS VALID, THIS STUDY SHOWS THAT AET, NOT ORT, IS THE PRACTICABLE ALTERNATIVE.

Even if MTA could rely on the 2014 Study, that study cannot support a decision to reject AET as a practicable alternative. Practicable is defined as "[a]vailable and feasible considering cost, existing technology and logistics based on the overall purpose of the project." Ch. 310(3)(R). MTA does not argue that AET is not available or that there are logistical impediments to implementing AET, as the technology is readily available and such facilities are already operating in numerous states, including Massachusetts. (CRTC Pre-Filed Jarvis Test., pp. 7-11). The only true distinguishing factor is cost and relative financial performance, which is why MTA instructed CDM Smith to conduct a relative financial analysis. (2014 Study p. ES-1).

With regard to cost, AET is far less expensive to construct—$4.5 million as compared to $36 million (based on the last available estimates). CDM Smith then confirmed that after considering every financial factor, "the best 10-year net total revenue, after recognizing both operating and capital investment cost, would come from AET." (2014 Study p. 48). As noted above, AET outperformed ORT by $8 million over that 10-year period. As such, AET, not ORT, was shown to be the practicable alternative.

But MTA still rejected AET, based, it says, on the conclusions in the 2014 Study. This

[10] It is baffling that the MTA Board has not elected to revisit this financial decision. Even if MTA was willing to incur an $8 million revenue shortfall in 2014, it is possible this shortfall will be significantly higher if MTA proceeds with its ORT facility today. MTA is a public agency and CRTC's assumption is that MTA will always attempt to incorporate changes in circumstances, and new data, in ensuring decisions are made that are in the best interest of the Turnpike's users and the State of Maine.

was due to two factors. (MTA Pre-Filed Test., Ex. D; CRTC Rebuttal Test., Ex. E). First, this $8 million surplus only occurred if MTA imposed a $3 surcharge on the pay-by-plate customers. Without any support whatsoever in the CDM Smith report, MTA concluded that such a surcharge "would not be tolerated in the real world" and "would simply not work." (CRTC Rebuttal Test., Ex. E; MTA Pre-Filed Test., Ex. D). As noted in CRTC's testimony, surcharges on pay-by-plate customers do work, and are tolerated in the real world, including surcharges that double, or more than double, the applicable toll rate. (CRTC Rebuttal Test., Ex. F, G). MTA has offered no support for its assertion that the proposed $3 surcharge is unworkable, and so this claim should be disregarded by the Department.

Further, Mr. Quinlan admitted that the $3 surcharge is a fictitious figure, and that based on his study, the actual surcharge should have been set much lower. First, Mr. Quinlan was not asked to set a surcharge that would result in an $8 million surplus for AET, but to set it lower, such that the revenue comparison between AET and ORT "becomes net revenue neutral." (2014 Study p. 16). Thus, the $3 surcharge should have been reduced to an "optimal" level to eliminate the $8 million surplus, a task Mr. Quinlan admitted he was not even asked to do. (Trans. p. 105, line 25 to p. 106, line 6).

Finally, the size of the surcharge suffers from the same timing problem discussed above—specifically, that the 10-year summary calculation used a premature tollbooth commencement date. When asked what would happen to his predicted surcharge (based on his data and assumptions) if Mr. Quinlan had done his 10-year summary calculation starting in 2019 or 2020, Mr. Quinlan testified that the required surcharge would be less than $2. (Trans. p. 115, lines 7-9). Thus, the assumed $3 surcharge was too large, both because it created a surplus and because MTA knew that its new tollbooth would never commence operations in 2015. The

MTA Board's rejection of AET on this basis, therefore, is legally invalid.

The second factor MTA cited in rejecting AET was Mr. Quinlan's predicted traffic diversions of 3,400 vehicles per day. (MTA Pre-Filed Test., Ex. D). As with the inflated surcharge, even based on CDM Smith's own data, there was never going to be 3,400 vehicles a day diverting from the Turnpike, and the MTA Board was aware of that when they voted.

We know this because CDM Smith's Table 5 shows that the 3,400 vehicle diversion figure was predicted to occur only in the year 2015. (2014 Study, p. 21, Table 5, "Toll and Technology Diversions"). As the MTA Board understood that the new tollbooth was not going to commence operations in 2015, it knew that there was never going to be 3,400 diversions per day. As with the other financial factors, the use of a fictitious start date for tollbooth operations skewed the data in favor of MTA's preferred alternative.

In addition, given that Mr. Quinlan has admitted that his $3 surcharge should have been set at a far lower level, and possibly lower than $2, even the 2015 diversion figure of 3,400 vehicles per day was incorrect. Table 4 of the 2014 Study shows the relationship between diversion rates and the size of the surcharge. For obvious reasons, as the surcharge is reduced, the anticipated number of diversions goes down. The 3,400 figure was calculated assuming a $3 surcharge, which CDM Smith predicted would generate 1,259,000 diversions per year (3,449 per day). (2014 Study p. 17, Table 4). If the surcharge had been set at $2, as Mr. Quinlan suggested would have been more accurate, CDM Smith would have predicted only 783,000 diversions per year (or 2,145 per day). (*Id.*) This is a 37% drop, just by correcting the surcharge figure.

And because the 2,145 figure, like the 3,449 figure, was only for 2015, the MTA Board should have corrected this number for the actual anticipated year of operations. As shown on CDM Smith's Table 5, regardless of the initial starting number, Mr. Quinlan predicted that

diversions would drop by 21% from 2015 to 2018. (2014 Study p. 21, Table 5). As the correct surcharge would have fixed the 2015 diversion number at 2,145, this figure should have similarly been reduced by 21%, resulting in an actual diversion number in year-one of tollbooth operations of 1,694. (*Id.*). This figure is half the diversion figure cited by the MTA Board when it rejected AET. (MTA Pre-Filed Test., Ex. D).[11]

With all due respect, these errors are either evidence of gross negligence or an intention to manipulate the data to support a pre-determined outcome. During the hearing Mr. Mills testified that when they rejected AET in 2014, they were already in the process of converting some of the smaller tollbooth facilities to ORT. (Trans. pp. 60-62). When questioned by Assistant Attorney General Bensinger if this meant the York tollbooth decision was predetermined, Mr. Mills backpedaled, assuring the Department that was not the case. (*Id.*). This was the right question to ask, and the answer was nonresponsive.

The data and analysis in the 2014 Study support only one conclusion—AET is the best financial and operational option for MTA, considering all financial factors and all challenges of collecting toll revenue from pay-by-plate customers. MTA used the worst possible assumptions for AET, and Mr. Quinlan's model still concluded that AET was the better financial option. Given that the surcharge and diversion numbers are, admittedly, inflated by 50% or more, these

[11] Nor does the 2014 Study seem to factor in Mr. Quinlan's conclusion, in his 2016 response to the eTrans study, that "relatively little" diversion would happen during the summer. (MTA Pre-Filed Test. Ex. AA, p. 3). Further, Mr. Quinlan admitted that when he did his diversion estimates, he relied on a "high level" assessment of the current condition of the diversion routes. (Trans. p. 123, line 6). This "high level" review just assessed the additional time it would take to drive down Route 1 to avoid the tollbooth, but did not consider the delays associated with "signal timing," "queuing at interchanges" or other factors that cause backups and delays on Route 1 and the other diversion routes. (Trans. p. 126, lines 1-11). Mr. Quinlan simply conceded that his model did not have the "level of detail" or the "specificity" to predict what the traffic conditions would be for the diverting traffic. It does not take a traffic engineer to conclude that, someone driving up to Maine, with two kids in the backseat crying out "when are we going to get there," will divert from the Turnpike, and take another hour or so of time fighting traffic on Route 1 to avoid a $3 dollar toll (a little more than the price of one gallon of gas). Mr. Quinlan's omission of any actual traffic data on the diversion routes seriously undermines the credibility of his diversion numbers.

factors cannot support the MTA's ultimate rejection of AET.

CONCLUSION

At this point, MTA has admitted that it has no idea what the relative financial performance would be of an ORT or AET facility constructed pursuant to any permit issued by the Department. It has no idea what the leakage would be, or what the diversions might be, or even the size of the savings in capital costs with an AET facility. It has no current information regarding back office expenses, or savings due to reductions in tolling staff positions. The record currently offers the Department no data, survey, study, or analysis that would support a permit for filling wetlands. The only information in the record that is arguably relevant, albeit out-of-date, suggests that AET is the only practicable alternative to replace the existing York tollbooth. Although MTA might prefer a large-footprint, capital-intensive, staff-heavy, expensive-to-maintain toll facility, its institutional priorities are irrelevant to its project's purpose, and the Chapter 310 rules.

Construction of an ORT facility is a bad idea for the Maine Turnpike, it's users, and the State of Maine. It also violates the most important threshold regulation in Chapter 310. As such, the Department should deny MTA a permit for its chosen alternative. AET is the only practicable alternative, and each year that passes this conclusion only grows stronger.

Date: July 14, 2017

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