

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

COMMONWEALTH EDISON COMPANY

**Approval of the Energy Efficiency and
Demand Response Plan Pursuant to
Section 8-103(f) of the Public Utilities Act**

ICC Docket No. 13-0495

Direct Testimony of

CLAIRE TRAMM

ON BEHALF OF

CHICAGO INFRASTRUCTURE TRUST

November 4, 2013

CHIEF CLERK'S OFFICE

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ILLINOIS COMMERCE
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1 **(L) INTRODUCTION AND BACKGROUND**

2

3 **Q. What is your name and business address?**

4 A. My name is Claire Tramm. My business address is Chicago Infrastructure Trust, 222
5 Merchandise Mart Plaza, Suite 1212, Chicago, IL 60654

6

7 **Q. By whom are you employed and in what capacity?**

8 A. I am employed by the Chicago Infrastructure Trust (“CIT”) as the Energy Director
9 there. I oversee the development and am responsible for the success of all energy-related
10 projects for the CIT, including ~\$1B in municipal building and facility energy efficiency
11 upgrades currently under consideration for deployment during the coming three year
12 EEPS regulatory period.

13

14 **Q. Please describe your background and experience in the field.**

15 A. I have more than 6 years of experience in the energy economics and finance field.

16

17 I began my career as a McKinsey consultant serving the energy, financial services,
18 consumer goods, and public sectors on strategic, operational, and policy challenges. I
19 contributed to several of McKinsey’s public reports on carbon and energy efficiency
20 economics, including the energy efficiency cost curve and barriers analysis published in
21 2009. Also, as a McKinsey fellow with the Civic Consulting Alliance, I led municipal
22 implementation of the Chicago Climate Action Plan and built a workforce development
23 strategy for green jobs in the region.

24 I then went on to lead Business Development for the Demand Side Management business
25 of Blue Star Energy, which was successfully acquired by AEP in 2012. There, I led the
26 development of Blue Star's commercial energy efficiency, demand response, and
27 distributed generation service lines and integrated them with their traditional energy
28 supply business.

29

30 I am also the CEO and Co-Founder of Effortless Energy, a residential energy services
31 company that makes home energy efficiency the no-brainer that it ought to be via an
32 innovative financing model called the Home Energy Efficiency Services Agreement.
33 Since our founding in 2012, we have won top cash awards at the Illinois Student Clean
34 Energy Challenge and the National Public Policy Challenge as well as the People's
35 Choice Award at the Midwest Clean Tech Open, and have also garnered a number of
36 other awards as well as considerable, favorable press coverage. I am also the co-founder
37 and student co-leader of the Center for Impact Measurement at the University of Chicago,
38 which leverages graduate student talent to deliver impact measurement studies and
39 consulting guidance to local and State-level public sector organizations as well as not-for-
40 profit organizations and social enterprises.

41

42 I am currently completing my Masters in Public Policy with a focus on energy efficiency
43 economics and finance at the Harris School of Public Policy at the University of Chicago.
44 Previously, I received a B.S. in Cognitive Science, a B.S. in Psychology, a B.A. in
45 Political Science, and a Liberal Arts and Management Certificate from Indiana
46 University.

47 **(II.) Introduction and Summary of Testimony**

48

49 **Q. What is the purpose of your testimony in this proceeding?**

50 A. To suggest an additional program be added to the utilities' EEPS program proposals in
51 order to meet the full 2% energy efficiency target during the coming 3-year cycle.

52

53 **Q. What additional program do you believe should be added to the utility's**
54 **program portfolio in order to help fulfill their full, regulated demand (2%) for**
55 **energy efficiency gains in the current period?**

56 A. I believe that a "Negawatt (and Negatherm) Feed-In-Tariff" (N-FIT) would enable the
57 cost-effective delivery of the full 2% target by the regulated utilities.

58

59 **Q. What is a negawatt or negatherm?**

60 A. It is generally shorthand for a unit of energy savings for a 1-year period. For example,
61 if an LED light bulb uses 10 kwh per year and an incandescent light bulb uses 100 kwh
62 per year, assuming exactly the same usage patterns and a 1-year lifetime for each kind of
63 light bulb, the replacement of an incandescent with an LED light bulb would create a 90
64 negawatt savings. This being said, the idea of negawatts and/or negatherms is flexible
65 enough to be altered to fit the current Total Resource Cost (TRC) calculation mechanism
66 for energy savings delivered under the EEPS.

67

68

69

70 **Q. Please describe the proposed N-FIT program in greater detail.**

71 A. The Negawatt Feed-In-Tariff program would compensate an Energy Efficiency
72 Resource Provider (EERP) (e.g., building/asset owner or efficiency service
73 manager/financier) per each negawatt delivered.

74

75 **Q. How would “negawatts” be compensated?**

76 A. EERPs would be compensated at the level of the EEPS current cost cap per unit of
77 energy savings, minus a small program administration fee that would be collected by
78 utilities on a per-negawatt basis. For instance, if the cost cap per unit of EEPS energy
79 savings were \$0.30/kwh, and the utilities incur a variable cost of \$0.05/kwh to administer
80 this N-FIT program, then the EERP would receive \$0.25 per kwh reduced. This
81 compensation could occur either a) in a lump-sum, up-front payment (before or after the
82 project is completed) or b) over time, as savings are realized, and paid in arrears. The
83 compensation per negawatt would be exactly the same for each negawatt delivered under
84 the program.

85

86 **Q. How many negawatts would be approved for compensation under the N-FIT
87 program?**

88 A. The N-FIT program would be used to acquire only the incremental amount of
89 negawatts between: a) the number of negawatts the utility’s other programs are projected
90 to deliver cost-effectively in a given year (or other appropriate period) and b) the number
91 of negawatts they are regulated to deliver in that year (or other appropriate period). After
92 the Negawatt Feed-In-Tariff program is fully subscribed for the period, no further

93 approvals for compensation under the program would be granted to EERPs until the
94 opening of the next period.

95

96 **Q. How often will proposed projects be reviewed for approval and reimbursement**
97 **under the N-FIT?**

98 A. Proposals would be reviewed on a rolling, first-come-first-serve basis up to the
99 aforementioned quantity cap.

100

101 **Q. Why is it important that projects be evaluated on a rolling basis?**

102 A. The current IPA energy efficiency resource procurement process, for which there are
103 multiple, once-annual hurdles to entry (first through the utility and then into the IPA
104 auction) is not conducive to widespread usage by project developers and potential EERPs
105 because their average project development timeline is much shorter, is dictated by other
106 considerations (e.g., annual capital budget approval by Boards, season of year, marketing
107 receptivity, etc.), and would benefit from greater certainty of acceptance into the program
108 (i.e., even if one enters the auction, one's bid is not necessarily accepted, lowering
109 willingness to undergo the administrative hassle of entering the auction in the first place).
110 Therefore, it is very important that projects be evaluated and approved on a rolling basis,
111 as they come up.

112

113 **Q. What criteria shall be used to evaluate proposed projects?**

114 A. The focus of evaluation for an EERP's project's admission into and compensation
115 under the N-FIT program should be based solely on the number of megawatts created, not

116 their cost. For example, if one Energy Conservation Measure (ECM) costs \$0.05/kwh
117 and another ECM costs \$1.00/kwh saved, both would be eligible for the \$0.25/kwh
118 compensation per negawatt hour. Therefore, ECM savings and measure lifetimes would
119 form the basis for negawatt calculations.

120

121 **Q. Why is it important that we ignore ECM costs when calculating the savings?**

122 A. For an N-FIT program to be helpful in increasing energy efficiency realization to
123 meet the 2% target without exceeding the cost cap, actual measure costs should be
124 ignored.

125

126 **Q. What if an N-FIT EERP wanted to install an ECM that was more expensive
127 than compensation per negawatt under the program?**

128 A. The EERP would pay for the remaining costs of the measure with private financing
129 (either their own monies or an external party's). The utility would get credit for the full
130 negawatt against its EEPS target, regardless of whether or not additional private
131 financing was also needed to complete the installation.

132

133 **Q. How would savings be calculated?**

134 A. The N-FIT program could compensate EERPs based upon either a) stipulated savings
135 or b) realized savings. Currently, the TRC calculation is based upon stipulated savings
136 estimates for a given ECM, where measure lifetime and average energy savings per
137 measure are multiplied in the numerator of the TRC to calculate the total stipulated
138 savings upon which EEPS program funding decisions are made. This could easily form

139 the basis of the N-FIT negawatt calculation as well. If unknown ECMs were proposed
140 for a given project, an energy efficiency engineering analysis could be done by the EERP
141 and approved by the utility (or done by the utility itself) to add that ECM and its
142 attributes to the list of recognized ECMs.

143

144 Alternatively, the N-FIT program could go beyond what is currently required for EEPS
145 calculations and track the realized savings using an ICC-approved “Negawatt Meter.” A
146 Negawatt Meter system would combine real-time weather, behavior, and energy use data
147 with verified infrastructure upgrade data such that realized savings could be tracked on an
148 on-going basis. While calculations using approved models could still be involved in a
149 realized savings system, this could provide more accuracy in the calculation of ongoing
150 negawatt delivery under an N-FIT program, and little need for additional third party
151 program evaluation of effective energy savings.

152

153 **Q. What if an N-FIT participant wanted to install an ECM that would save both**
154 **watts and therms? Which utility’s EEPS program would compensate the negawatts**
155 **and negatherms?**

156 A. Each utility would review all proposals from their own customers using the same
157 web-based application form for the N-FIT program. If the project were projected to
158 produce energy savings of the variety which that utility supplies, it could be approved for
159 compensation under that utility’s N-FIT program. The EERP would receive payment
160 from a utility in exact proportion to the units of energy saved. For instance, if an EERP
161 proposal for a home weatherization saves 85 therms and 15 kwh per year, then the

162 servicing natural gas utility would compensate the EERP for 85 negatherms per year and
163 the servicing electric utility would compensate them for 15 negawatts per year.

164

165 **Q. How will projects be evaluated?**

166 A. Using the same third party evaluation criteria as today.

167

168 **Q. How will utilities ensure projects are completed properly?**

169 A. On the front end, utilities could ask EERP participants for a Letter of Intent to finance
170 any additional project costs when they submit their project application for review. On the
171 back end, one method is to use the existing quality control and verification system
172 currently used by utilities under their other EEPS programs. Another method is to
173 leverage EERPs' own monitoring and verification (M&V) systems to reduce the cost of
174 utility M&V. For instance, where an ESCO or ESCO-like party is employed to guarantee
175 and track energy savings for a given project, their analysis may be adopted for purposes
176 of quality control and M&V in the N-FIT program. Building owners could also be asked
177 to sign forms stating that the measures have been properly installed. Further, analytics
178 tests on energy bills pre- and post-ECM installation can be performed to verify that the
179 ECMs were actually installed and performing within expected error ranges.

180

181 **Q. Is a Feed-In-Tariff a new idea?**

182 A. No. FITs exist in other countries and other utility jurisdictions within the US. They
183 are structured in similar ways. Most existing FIT programs compensate per unit of

184 renewable energy produced, though at least one program in the Northwestern U.S.
185 compensates per unit of energy saved.

186

187 **Q. What precedent exists for utility attribution of negawatts under such a**
188 **program?**

189 A. Currently, many activities that do not directly produce negawatts are funded using
190 EEPS dollars. For instance, a visit from a home energy efficiency auditor does not in
191 itself cause any energy to be saved (merely a recommendation to be given), but it is
192 currently funded by EEPS programs. Similarly, marketing and M&V of EEPS programs
193 does not cause any actual savings to be created. Thus, the N-FIT program is really a
194 lower-overhead, purer form of the EEPS programs currently in place since the N-FIT
195 program pays purely per unit of actual, delivered performance and nothing else.

196

197 Additionally, on-bill finance programs are rapidly expanding, and could be used in
198 partnership with an N-FIT program to allow utilities to attribute the savings they are
199 enabling through their on-bill collections mechanism.

200 Currently, there is room for EEPS third party evaluators to attribute ECM savings funded
201 through Energy Impact Illinois energy efficiency loans to utilities. While the utility gets
202 no direct credit for these loans, it can receive credit informally through this evaluation
203 process for EEPS measures partially paid for using the EEL.

204

205 However, there is currently no formal framework for attributing privately-financed
206 savings to utility EEPS goals. The latest version (published February 2013) of the

207 Stakeholder Advisory Group's (SAG's) Policy Manual presents the issue in the very last
208 item of the document but leaves it "OPEN."

209

210 **Q. How would funds for the N-FIT be collected?**

211 A. N-FIT program expenditures would be planned for, collected by, and trued up in the
212 same way as existing EEPS programs are.