

	A	B	C	D	E	F	G	H	I	J	K	L
1			2021 CT EEB EVALUATION PLAN UPDATE - PROJECT LIST (Used in 1/20/21 Plan Draft)									
2												
3		\$1,200	<=Available 2021 budget-Allocated for 2021 (\$1.2 Million) + Unspent contingency									
4		\$1,200	<= Net cost for selected projects									
5												
6		11	<= Number of Add-on projects				Key for 2021 Priorities Column G: H/M/L (High / Medium / Low)					
7		4	<=Number of "new" projects / RFPs				Color key - green shading in columns H, I, J. 1=yes (green), 0=no					
8		1	<= Number of projects "emerging" TBA during year				Temporary shading in beige to indicate change in that project after last discussion with committee (some only changed \$)					
9												
10	Row	Category	Project Name	Add'l Budget	Original /Existing Budget	Firm	Priority for 2021	Include (1) / Exclude (0)	Change \$ to existing contract	RFP asap 2021	Key Outputs promised (short)	Caveat / rationale / considerations
11	ADD TO EXISTING CONTRACTS - Current Projects / Obligations; Project Budgets affected by COVID-19, data, etc.											
12	1/RW	Budget add'n for 2019 contracted project (X1941)	X1941 MF Impact Evaluation -- Budget	\$36	\$369	TRC	H	1	1	0	Budget issues	Budget adjustment / Covid changes
13	3/RW	Budget add'n for 2019 contracted project (R1982)	R1982 HVAC Metering -- Budget	-\$150	\$740	Evergreen	H	1	1	0	Budget issues	Budget adjustment / Covid moves 2nd year metering to Next Plan \$
14	4/DG	Budget add'n for 2019 contracted project (C1901)	C1901 - C&I Sector-wide Process Eval (non-SBEA) -- Budget	\$20	\$593	ODC	H	1	1	0	Budget issues	Budget adjustment / data delays & complexities
15	ADD TO EXISTING CONTRACTS - Tasks / Project concepts to integrate into Existing Projects; work with contractors on project refinements											
16	2/LS	Add to 2019 contracted project (X1931)	X1931 In-depth PSD Review - Budget	\$20	\$604	ERS	H	1	1	0	Budget Phase 1 / Phase 2 information and \$20K for PSD support for EA Team discussions with utilities on 2021 PSD.	Budget adjustment between phases and support to EA team in technical questions in discussions with utilities in 2022 PSD update.
17	5/DG	Add to 2019 contracted project (C1901)	C1901 - C&I Sector-wide Process Eval (non-SBEA) -- Add'l Profiling/equity	\$55	\$593	ODC	H	1	1	0	In-depth profiling of C&I for equity, access, participation, geographic differences, including DECD distressed areas.	Additional funds to support more in-depth profiling and database work supporting multiple projects.
18	6/RW	Add to 2019 contracted project (X2022)	X2022 - Education, Workforce, Community, Customer Engagement Evaluation -- More programs than RFP'd	\$140	\$275	Illume	H	1	1	0	Strong evaluation of programs under all 3 initiatives including workforce development; Template design features to assure evaluability suitable for each initiative type; work toward estimating savings for a couple of more mature programs, and if not possible, identifying specific design/tracking changes or parameters needed to support savings estimates in future.	When this project was RFP'd, the EA Team misjudged the size / number of programs to be evaluated. The 3 initiatives contain at least 14 programs, necessitating an increase in budget to assure deliverables can be met.

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19		Add to 2019 contracted project (R1983)	R1983 - HES & IE Impact, Process, and Profiling Evaluation -- expanded equity, assessment/rec'm of COVID virtual audit procedures	\$90	\$800	NMR	H	1	1	0	Investigation of program equity, access, participation, data-based review of COVID-19 changes / impacts, and of new remote audit procedures and assessment of application in future.	Additional drill-down topics have been requested post-RFP, but appropriate add-ons and delay in contract allows incorporation into project.
20	7/LS	Add to 2019 contracted project (R2029)	R2029 SF Weatherization Assessment / Update - more coordination with DEEP process	\$35	\$75	NMR	H	1	1	0	1-2 recommended "definitions", discussion, and associated quantitative estimate(s) of SFWx goal progress/status, with metric(s) that can be calculated regularly and cost-effectively in the future. Some additional funding as well to coordinate with DEEP and possibly some input or support related to public process.	Additional coordination tasks and support needs have arisen after RFP; easily incorporated with delayed start from contracting.
21	8/LS	Add to 2019 contracted project (X1932)	X1932 - Demand Response (UI) -- Add Eversource DR in CT	\$75	\$150	NMR	H	1	1	0	Impact and process recommendations (savings, participation rates, incentive levels, structures, opt-out rates, coordination / co-delivery) of current residential / near-term DR offerings including potentially thermostats, EV, batteries; may involve some review of home automation, as it allows for greater DR participation.	Will need to find a way to transfer money to Guidehouse who currently is conducting studies under the MA evaluation framework. , or figure out a way to shift some of that responsibility to the CT contractor DNV GL
22	9/LS	Add to 2019 contracted project (R1959)	R1959 - R&A Program Evaluation - add'l barriers research	\$35	\$135	NMR	H	1	1	0	Next steps / add-on analyses and specific program design recommendations related to program barriers to help ID recommendations on how to recover more of the significant opportunities that R1959 project indicates are not yet being recovered by this program.	

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23	10/RP	Add to 2019 contracted project (C1902)	C1902 - ECB NTG and Baseline - add'l compliance work	\$90	\$450	NMR	H	1	1	0	Estimated code compliance rates for NRNC; program design recommendations	Main elements related to compliance practices can be added on to existing project. Stakeholders also expressed interest in other related issues, such as attribution for code promulgation efforts which do not fit as well as an add-on. Given the complexity (and cost) of attribution work, we recommend that if these elements are needed, these other issues be handled through negotiated processes in the near term.
24	11/RP	Add to 2019 contracted project (C1902)	C1902 - ECB NTG and Baseline - NTG for add'l non-lighting upstream initiatives.	\$140	\$450	NMR	H	1	1	0	NTGR for C&I upstream non-lighting measures by category	Synergies in examining NTGs for upstream into ECB NTG study
25	12/LS	Expand / repeat 2019 contracted project-may take contract (R1963); several month delay	R1963c - Lighting Study - Sales or Shelf Stocking analysis	\$75	(previous studies @ \$110 & \$40)	NMR or SCS	H	1	1	0	Next step tracking to make sure market is behaving as expected, tailored to whether EISA is implemented well/soon, or later.	Implement one of these 2 designs at appropriate time in 2021 based on EISA prediction
26	13/LSRP	New, add to 2019 contracted project	X1931 PSD - add Integrated and Network Lighting controls - Near-term / Quick impact factors for PSD	\$50		ERS	H	1	1	0	Updated impact factors for important (growing) lighting controls measures.	Existing research literature regarding the impacts of networked and luminaire-level controls is scarce, so the results from the phase may not be particularly reliable.
27	14/PJ	New, add to 2019 contracted project	X1931 - New Measures / Smart thermostat for C&I and small business applications - near-term lit-based and adjusted	\$90		ERS	M	1	1	0	PSD chapter expanding the current commercial setback thermostat measure (section 3.2.5) to include commercial smart thermostats. Stakeholder interest in evaluated savings compared to manual or programmable t-stats (compared to WIFI), and reviewed heating savings, especially for gas customers, using either updated formula or deemed savings. Will ID what is possible; if more in-depth study needed, identify / prioritize for primary work for later year.	Much of the research on smart thermostats has been confined to residential applications. The EA team has identified studies of commercial applications in MI and IL, but region-specific research on commercial applications is sparse. Coordinate with efforts in Massachusetts to develop a multi state evaluation study of smart thermostats in commercial buildings.
28	NEW PROJECTS / RFPs - New Projects with Substantial Interest to be RFP'd ("Emerging issues" not RFPd)											

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29	15/RW	In Plan, keep (R1968), New Project / RFP	R1968 - RNC Baseline and Code Compliance (Phase 1)	\$75			M	1	0	1	User Defined Reference Home values, and to the degree possible, information to help inform attribution of C&S efforts. Two phase; set-up in 2021 (\$75K), in-depth 2022 (at ~\$275).	Due to COVID, the adoption of the next code update has been delayed to late 2021. Although in-depth study efforts would not be started until 2022, we are proposing starting the project in 2021 for set up and to assure contractor is contracted in time to begin at start of year 2022. Second phase (2022 portion) is \$275K. Possibly some complexity about crossing plans.
30	16/PJ	In plan, keep (R2015), New Project / RFP	R2015 - Low load Residential New Construction (lit & interviews)	\$65			M	1	0	1	Energy savings and cost effectiveness of low load residential new construction approaches. Also customer acceptance, program implementation barriers, training needs will be addressed.	Not conducting full-on potential study; reviewing / coordinating with efforts in Mass and VT on Passivhaus experience. Other notes - Could be more applicable to multifamily v. single family buildings. New construction is small fraction of existing buildings, so may be lower priority.
31	17/DG	New, not in original plan, New Project / RFP	C2117 - Persistence study for RCx - Feasibility Study	\$50			H	1	0	1	Recommendations for field study of 3-5 RCx measures.	Need basic information on persistence of RCx measures. Selecting a few / there may be too few RCx installations or recent RCx installed through BES may be too young to warrant in-depth review. Possible that early 2000's O&M Pilot measures can be a study subject.
32	20/RW	New, not in original plan, New Project / RFP	R2120 - Implications of program incentive differences in appliance recycling programs	\$35			M	1	0	1	Program guidance and implications related to the differences in incentives for recycled refrigerators, freezers, and potentially dehumidifiers based on offerings in MA vs. CT. The two programs are the same and have the same vendors, but the incentives for CT are \$30 and MA is \$75.	MA study is underway to estimate gross and net savings / NTG for recycled refrigerators, freezers and dehumidifiers (if offered), and the states have same vendors and same design except higher incentives in MA (\$75 vs. \$30). CT stakeholders interested interest in conducting interviews and reviewing ARCA data to assess impact of differences in incentives to inform program design. Results from MA on initial research topics can be examined for suitability for CT.

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33	18/RP	In Plan, keep (X1940), award later in year	C1940 - Emerging Issues and Joint State Projects 2021	\$174			H	1	0	0	Retain funds to ID best studies to join in MA / RI, etc. PLUS Retain funds and assign in 2021 for priority topic	Decide after MA/nearby state planning or as new or expanded issues arise in 2021 (Apr/Aug, would need to be existing contractor for fast turnaround). Note, would need to identify fund transfer mechanism for joint projects.
34												
35												
36												
37	NOT RECOMMENDED 2021: Projects without Strong Support or Not Recommended during COVID-19 or needs more info											
38	19/LSRW	New, do not add, wait for other research to complete.	C2119 - New measure - home automation	TBD			L	0	0	0	Possibly impacts, c/e of automation measures, and discussion of influence on participation in DR programs.	This study is not well-defined from discussions; defer until need is clearer and consider joining with neighboring state(s). NOTE: MA study on pool pumps, dehumid, Wi-Fi-enabled equipment including cost-effectiveness. ID's that potential for controls exists. Note also Avoided cost have reduced 20% for capacity in future; may have increased pressure against DR.
39	21/DG	New, do not add, premature, needs policy discussions, consider 2022	X2121 - Barriers to electrification	\$100			L	0	0	0	Assessment of electrification in other states and recommendations on how best to promote electrification, including HP technology, in new and existing residential and commercial buildings. Identify barriers to adoption faced by homeowners, contractors, builders to electrify residential & commercial buildings. Identify soft costs for HP.	State interest in electrification and building decarbonization; likely some further DEEP direction in about a year. Study may be premature at this point. Need guidance from DEEP & EEB about CT scope / potential plans for electrification.
40	22/PJ	New, consider 2022 / contingent based on C1902 results.	C2122 - NTG studies for lost opportunity (TLED, LED retro and new, networked lighting controls, CAC/HP rebates, gas furnaces and boilers NTG and ISP, and steam traps)	\$200			L	0	0	0	ISP Baseline and accompanying NTGRs for C&I Lost Opportunity measures (potentially 1) TLEDs; 2) LED fixtures retrofit and new; 3) Networked lighting controls (elsewhere); 4) CAC / HP rebates; 5) assess NTG & ISP if gas continues to promote furnaces and boilers; 6) NTG for steam traps if significant savings.)	Contingent on current study; hold until those results are known - not this cycle.

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41	23/LSRW	In Plan, being done in MA, reconsider CT issues in 2022 (R1969)	R2123 - Behavior Program Evaluation	\$35			L	0	0	0	Savings, customer impressions (including those previously receiving Opower). However, program doesn't begin until 2021; deferring to next period.	There is already an approved workplan in MA that includes specific state breakouts. Includes billing analysis. If warranted, consider in 2022 (maybe with MA) to get impacts and actual experience with program in CT in 2021.
42	24/PJ	New, do not add; existing study, few CT observations to tailor/study	C2124 - Persistence Study for SEM	\$25		ERS	L	0	0	0	Measure lifetimes for SEM program engagements.	Recent DNV-GL study for the Energy Trust of Oregon recommended a 7 year measure life for SEM measures. CT PI more interested in RCx measures as SEM participation is low. MA is also interested in updating their values based on the DNV-GL/ETO study.
43	25/PJ	New, do not add, contingent on current project, consider later	C2125 - C&I Hours of Use - focus on standalone HVAC	\$350			L	0	0	0	Heating and cooling equivalent full load hours for commercial buildings	Contingent on results from existing project (on HOU by ERS). If warranted, bid out later, or explore multi state coordination (may be better option as this may be too big for CT to handle alone.)
44	26/RW	New, do not add this year; not feasible / Covid	R2126 - HES follow-up on Air sealing, duct sealing, insulation practices	TBD			L	0	0	0	Recommendations for program improvements deriving from assessment of vendor performance and work quality, barriers, and additional savings potential, especially related to air sealing, duct sealing, and insulation.	This project cannot be scheduled for 2021, with COVID restrictions and interim on-site work by vendors. In addition, the costs of doing this study as a stand alone project are too high too justify. Could be added to an on-site project, if and when those are restarted after COVID
45	27/LSPJ	New, do not add, delay for MA results; needs further discussion/review of priority measures - could DISCUSS	X2127- Controls for electric and gas measures	TBD			L	0	0	0	Savings values for limited number of controls - potentially EMS, HVAC controls (commercial) or HP controls (residential)	There is a MA study working on integrated controls (although in res sector), including work on EMS vs. integrated residential controls / small commercial mini-splits. Expect to finish EMS in May 2021, and mini-split study fall 2021. PSD also lacks separate EMS (in custom).

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46	28/RWLS	In Plan (2020), do not fund; data difficulties (X2006)	X2020 - New Measure - Advanced Power Strips	\$200			L	0	0	0	Recommendations for retail and DI support of APS; savings, approaches in other states.	The updated PSD has APS deemed savings values for Tier 1, Tier II (IR), and Tier II (IR-OS) APS from a 2018 NMR APS metering report. Significant data difficulties have been experienced in studies on other states (including \$200K in another state dealing with manufacturers) and a new study may not be warranted at this time. The costs of doing this study as a stand alone project are too high too justify. Could be added to an on-site project, if and when those are restarted after COVID.
47	29/RW	New, do not add - Covid and contingent on current project.	X2129 - MF weatherization corridor CFM reduction factor, COPs, HOU, Weatherization	\$300	Maybe later		L	0	0	0	Recommendations on air sealing savings updated / improved over the Steven Winters study.	Waiting for results for cfm/air leakage from TRC study X1941; review that first to see if significant savings available. Also, COVID is a barrier in near-term, and multi-family is difficult and project could not get underway in a meaningful way within this 3-year plan. In addition, the costs of doing this study as a stand alone project are too high too justify. Could be added to an on-site project, if and when those are restarted after COVID
48	30/LS	New, do not add, needs policy first	X2130 - Evaluation of non-energy goals	TBD			L	0	0	0	Support CT work reviewing NEIs in cost-effectiveness test.	Difficult to identify as a contracted research project as needs would evolve. Use in-house resources until "project" is better defined OR until CT has more clarify on allowed NEBs. Also, for quantitative estimates, there is an existing project.
49	31/LS	New, don't add, being conducted in current project	R2131 - Residential Load Shapes (becoming more important)	\$35			L	0	0	0	Residential loadshapes for key end-uses, adjusted to CT zone.	Basics already being conducted in ERS study, using tool from MA; if need more detail, consider follow-up later.

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50	32/LS	New, don't add, being conducted in current project; more detailed not possible / Covid.	C2132 - Commercial Load Shapes (becoming more important)	\$100			L	0	0	0	Load shapes for end-use categories (chillers, RTUs, lighting, HPs)	To do metering project, costs would be high, and Covid is a barrier. MA has an existing load-shape modeling tool and this work is being conducted as one of the PSD projects. They will be seeing if CT data can be integrated, or if MA model / data needs tweaking for CT. If metering work is later indicated, can be considered after review of these results and after COVID.
51	33/LS	In Plan (C1920), deferred to 2022/ISO	C1920 - EO Impact Evaluation, Phase 1	\$565			L	0	0	0	Impact results	Study was in Plan; deferred to next cycle in 2020 update.
52	34/LS	In Plan (C1918), deferred to 2022/ISO	C1918 - SBEA Impact Evaluation	\$375			L	0	0	0	Impact results	Study was in Plan; deferred to next cycle in 2020 update.
53												
54	35/RW	New, already in X1941	MF Common area ductless heat pump	n/a			na	0	0	0	MF Common area ductless heat pump	Already included in X1941
55	36/RW	New, already in X1941	MF common area lighting	n/a			na	0	0	0	MF common area lighting	Already included in X1941