

IEc



Site Selection and Permitting Soft Cost Calculator (SCC)

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Soft Cost Calculator (SCC) Purpose

Estimate value of reducing costs associated with:

- Site selection
- Permitting
- Interconnection
- Inspection

Why does this matter?

- Soft cost not declining as quickly as hardware cost
- Policymakers acting to reduce these costs
- SCC quantifies benefits of soft cost improvements

SCC Scope

Fees

- Permit and interconnection application
- Consultants
- Software and data

Labor

- Staff hours selecting sites
- Staff hours completing paperwork

Idle time

- Days waiting for permitting, interconnection, inspection approvals
- Days spent selecting sites

SCC Methodology

Soft Cost Category	User Input	SCC Calculations
Fees	\$ Value Before / After EPIC project	1. Subtract
		2. Adjust for inflation
Labor	Hours Before / After EPIC project	1. Subtract
		2. Multiply by hourly rate
		3. Adjust for inflation

SCC Methodology

Soft Cost Category	User Input		SCC Calculations	
Idle Time	Days Before / After EPIC project		1. Subtract	
	Net Present Value (NPV) of DER <u>OR</u>	kW capacity Avoided cost/kWh Install type (PV Only)	2. Use NPV input <u>OR</u>	Estimate NPV from input values
			3. Adjust NPV based on idle time change	
			4. Change in NPV = benefit	

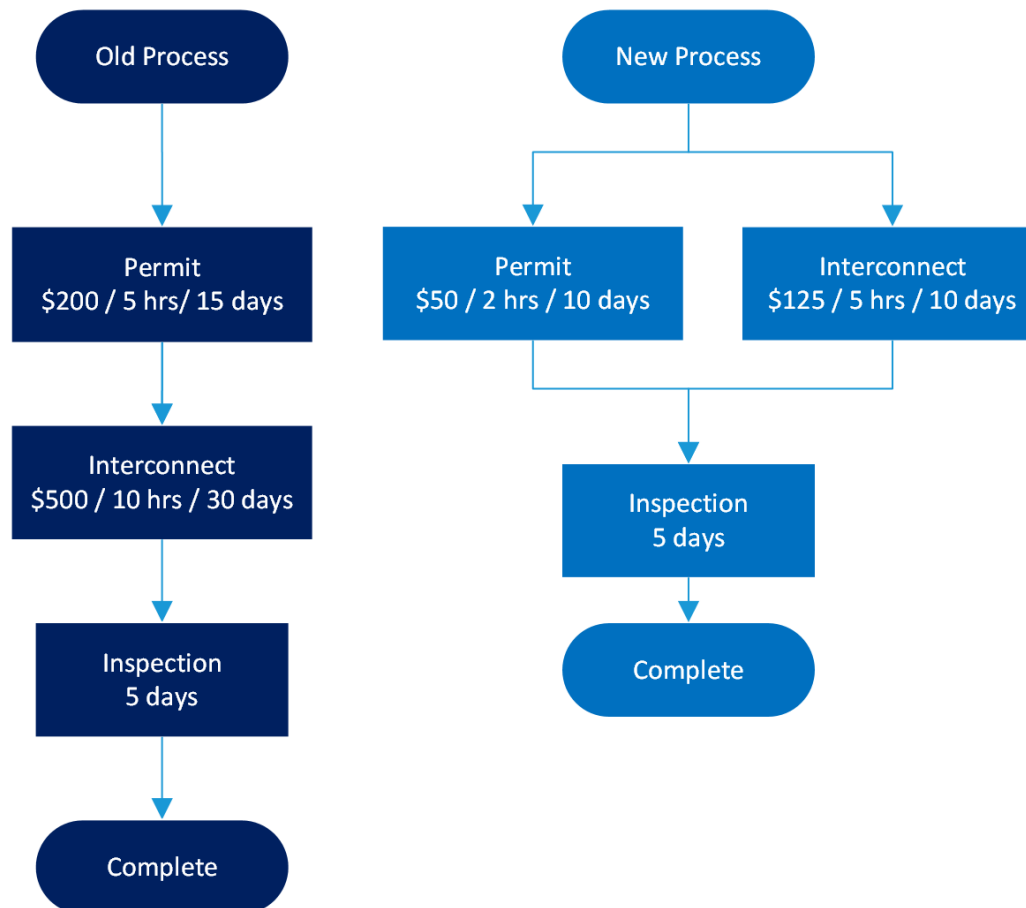
SCC Format and Structure

Excel file containing the following tabs:

		Tab Name	Function
User Tabs	{	Overview	Read Me
		General Inputs worksheet	All User Inputs
		Results worksheet	Results
Back End	{	CUSR0000SA0	Data containing periodically updated assumptions including inflation, electricity rates and equipment costs
		Moodys Data	
		SAM Modifiers	
		Commercial Rates	
		Residential Rates	
		EIA Rate Data	
		Field Validation	Calculation tabs
		Idle Time Days	
		Idle Time Cost	
		Annual CPI IEc	
		SAM Variables	
		SAM Cash Flow	
		Labor Cost	

Example #1 - SCC Applied to Streamlined PV Approvals

Municipality streamlines PV permitting, reducing fees (\$) / labor (hours) / idle time (days) for 5kW residential PV



Example #1 – SCC Applied to Streamlined PV Approvals

<i>Permit Fees Paid to Local Building Authority</i>	
Pre-project	\$200
Post-project	\$50
Change	\$150
<i>Interconnection Application Fees Paid to Utility</i>	
Pre-project	\$500
Post-project	\$125
Change	\$375
Total Direct Permitting Cost Change	\$525
<i>To Complete Interconnection Application</i>	
Pre-project	10
Post-project	5
Change	5
<i>To Complete Building Permit Application</i>	
Pre-project	5
Post-project	2
Change	3
Total Labor Hours Change	8

Example #1 – SCC Applied to Streamlined PV Approvals

Requirements for Estimating Idle Time	
Is DER installation a PV system?	Yes
Total Wait Time	Days/project
<i>For Building Permit Approval</i>	
Pre-project	30
Post-project	10
Change	20
<i>For Interconnection Application Approval</i>	
Pre-project	15
Post-project	10
Change	5
Project NPV Calculations	
<i>If estimated (PV Only)</i>	
PV Capacity (kW)	5
Install Type	Residential
<i>Avoided Energy Cost</i>	
Use Default Value?	Yes

Example #1 – SCC Applied to Streamlined PV Approvals

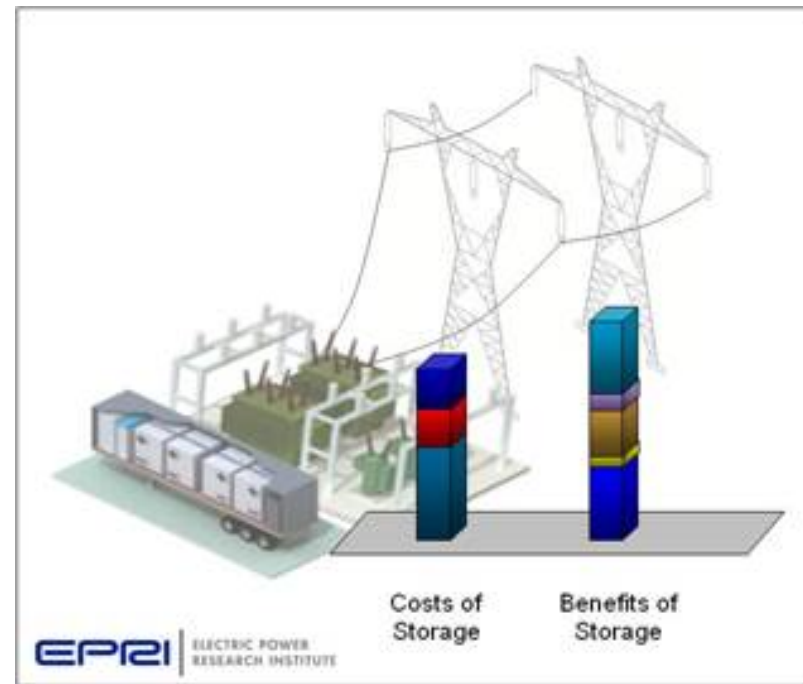
RESULTS SUMMARY: PV Permitting Portal Project

Cost Reduction per Project	\$/Project (nominal \$)	\$/Project (2021 \$)
Fees	\$525	\$525
<i>Data Access</i>	\$0	\$0
<i>Software Packages</i>	\$0	\$0
<i>Site Selection Consultants</i>	\$0	\$0
<i>Permitting</i>	\$150	\$150
<i>Interconnection</i>	\$375	\$375
Labor	\$800	\$800
<i>Site Screening</i>	\$0	\$0
<i>Permitting Application</i>	\$300	\$300
<i>Interconnection Application</i>	\$500	\$500
Idle Time	\$73	\$73
<i>Site Selection</i>	\$0	\$0
<i>Permitting</i>	\$37	\$37
<i>Interconnection</i>	\$5	\$5
<i>Parallel Process</i>	\$31	\$31
<i>Inspection</i>	\$0	\$0
Total	\$1,398	\$1,398

Example #2 - SCC Applied to StorageVET

Developer switches from commercial software to StorageVET to evaluate DER project

- Before - Developer buys \$4,000 commercial software license, takes 1 month to complete evaluations
- After - Developer utilizes free StorageVET software, reduces site selection time from 1 month to 2 weeks



Example #2 - SCC Applied to StorageVET

<i>Fees Paid for Software Packages used to Evaluate Sites</i>	
Pre-project total software licensing costs	\$4,000
Pre-project average total projects per licensing payment	1
Post-project total software licensing costs	\$0
Project Inputs - Idle Time Costs	
Requirements for Estimating Idle Time	
Does the project reduce idle time?	Yes
Use Grantee-Calculated NPV?	Yes
NPV	1000000

Example #2 - SCC Applied to StorageVET

RESULTS SUMMARY: StorageVet

Cost Reduction per Project	\$/Project (nominal \$)	\$/Project (2019 \$)
Fees	\$4,000	\$4,315
<i>Data Access</i>	\$0	\$0
<i>Software Packages</i>	\$4,000	\$4,315
<i>Site Selection Consultants</i>	\$0	\$0
<i>Permitting</i>	\$0	\$0
<i>Interconnection</i>	\$0	\$0
Labor	\$0	\$0
<i>Site Screening</i>	\$0	\$0
<i>Permitting Application</i>	\$0	\$0
<i>Interconnection Application</i>	\$0	\$0
Idle Time	\$3,690	\$3,981
<i>Site Selection</i>	\$3,690	\$3,981
<i>Permitting</i>	\$0	\$0
<i>Interconnection</i>	\$0	\$0
<i>Parallel Process</i>	\$0	\$0
<i>Inspection</i>	\$0	\$0
Total	\$7,690	\$8,296