

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	kW capacity	2. Use NPV input	Estimate NPV from input values
	<u>OR</u>	Avoided cost/kWh	<u>OR</u>	
		Install type (PV Only)		
			4. Change in NPV = benefit	

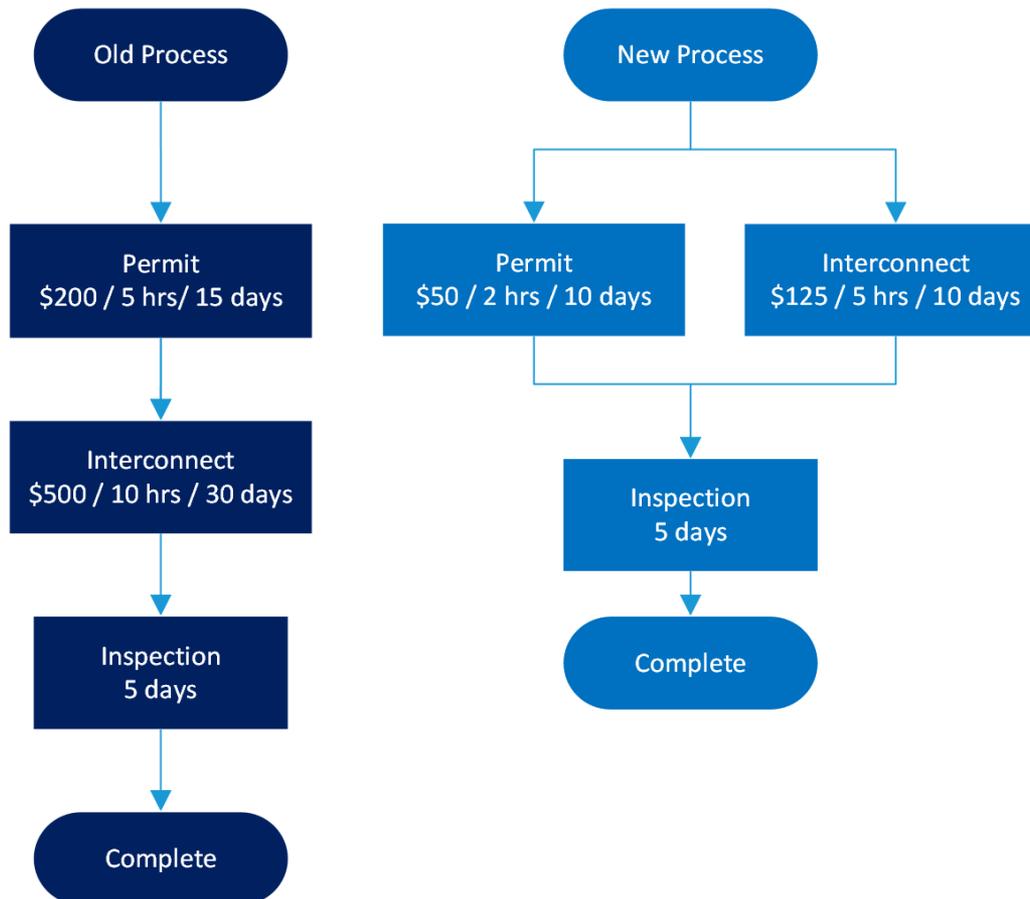
SCC Format and Structure

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

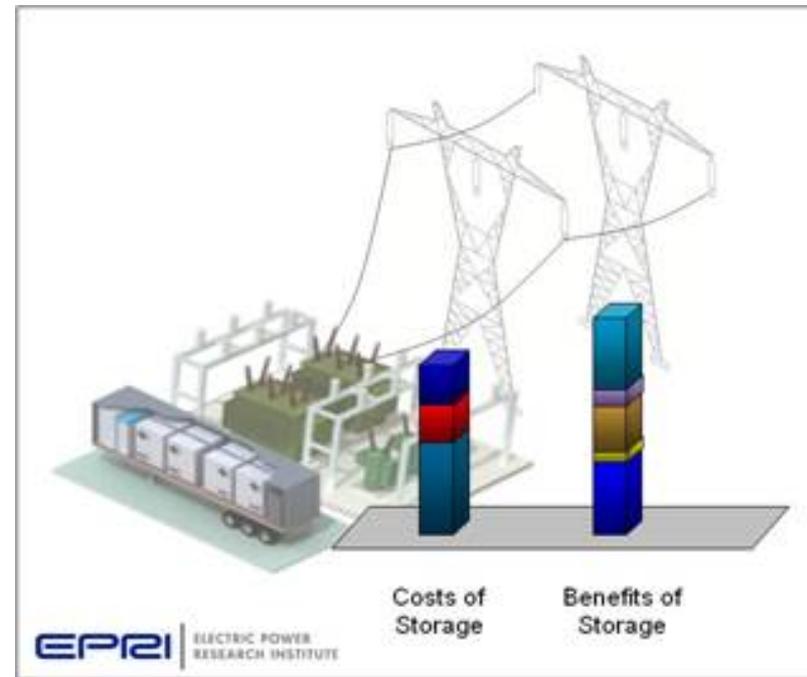
RESULTS SUMMARY: PV Permitting Portal Project

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