“Keep your eyes on the stars and your feet on the ground.” – Franklin D. Roosevelt

Expanding residential solar markets
Driving down costs will greatly increase addressable market for residential PV

Addressable U.S. Rooftop Market for Residential Customers

GW

States

$3.50
$3.75
$4.00
$4.25
$4.50
$4.75
$5.00
$5.25
$5.50
$5.75
$6.00
$6.25
$6.50
$6.75
$7.00
$7.25
$7.50
$7.75

The residential market sizing by ThinkEquity assumes that solar facilities are purchased by individual homeowners. We have modified the analysis to reflect additional federal subsidies worth $0.50/W from which commercial owners such as SunRun benefit.

Source: ThinkEquity “Think Greentech” Feb 2010
The current process limits scale and cost reduction potential.

Bureaucratic and inefficient processes for permitting and interconnection constrain growth.
Permitting is the keystone to scale

1. Permitting is a major driver of higher soft costs in the US

<table>
<thead>
<tr>
<th>Cost per watt</th>
<th>Germany</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$3.50</td>
<td>$5.80</td>
</tr>
<tr>
<td>Permitting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Permitting is the keystone to scale

1. Permitting is a major driver of higher soft costs in the US

2. Permitting has significant cost reduction potential

### Average Cost per Watt (5 kW)

- **Current Average**: $0.50
- **Best Practice Costs**: $0.12
- **German Costs**: $0.03
Permitting is the Keystone to Scale

**Permitting Reform**: Reduces pricing and simplifies sales and installation cycle leading to increased market penetration

**Market Penetration**: Increases volume and velocity of product delivery creating operational predictability

**Operational Predictability**: Enables efficient deployment of resources and speed of installation reducing capital requirements

**Capital Requirement**: Shorter sales cycles reduce per unit capital requirements and volume improves installer capital structure

**Customer Satisfaction**: Low cost, fast and easy product delivery increase customer satisfaction reducing sales & marketing costs

* Reductions are estimates based on typical installer cost allocation
### Cost reduction potential

<table>
<thead>
<tr>
<th>Step</th>
<th>Cost Drivers</th>
<th>Reduction Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design system to comply w/AHJ reqs</td>
<td>Extra attachments, Double flashing, Labeling, Add extra disconnect, Unable to install supply side tap, Smaller system due to fire setbacks</td>
<td>Reduced customer referrals, Cancellations due to delay, Lower close rates from higher cost</td>
</tr>
<tr>
<td>Prepare application</td>
<td>Determine reqs., Zoning app., Structural calculations, Draw system plans</td>
<td></td>
</tr>
<tr>
<td>Submit application in person</td>
<td>Submit permit application in person, Pay permit fee</td>
<td></td>
</tr>
<tr>
<td>Field inspection</td>
<td>Inspector conducts inspection, Rework and re-inspection, In-process inspection, Travel to and from customer's house, Wait for inspection</td>
<td></td>
</tr>
<tr>
<td>Sales &amp; marketing costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Total = $2,516*
Cost reduction potential

Total = $610
Permitting reform preserves and accelerates the PV impact in CA

Figure 1: BAU vs. Streamlined Permitting Regime Solar Installation Projections

Natural (Business-As-Usual) vs. Incremental (Streamlined Permitting)

Economic and Fiscal Impact Analysis of Residential Solar Permitting Reform
Permitting = additional $5 billion ROI

CA next 9 years
Economic Impact: $28.4 billion
Fiscal Impact: $1.3 billion
Base job forecast: 21,780

Permitting reform
Economic Impact: $5.1 billion
Fiscal Impact: $270 million
Incremental job impact: 3,860

“Economic and Fiscal Impact Analysis of Residential Permitting Reform, July 2011”
We must activate the political power of the residential mainstream
The potential

US Cell phone and Internet subscriptions over time (M)
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