Supplementary Data

Diffusion into new markets: Evolving customer segments in the solar photovoltaics market

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The data presented below is supplemental to our primary analysis and could not be included in the main text due to length considerations. The additional results include:

- Sensitivity analysis on trends of important factors that prompted adoption for alternative definitions of ‘early’ and ‘recent’ adopters (S1 & S2)
- Sensitivity analysis on demographic and political identities for alternative definitions of ‘early’ and ‘recent’ adopters (S3 & S4)
- Contingency tables for political, social, and economic identities for early and recent adopters (S5)
- Sensitivity analysis on prompts sparking interest for alternative definitions of ‘early’ and ‘recent’ adopters (S6 & S7)
- Comparison of demographic and adoption factors for buyers and leasers (S9)
- Comparison of how buyers and leasers prioritize and/or perceive business model characteristics (S10)

Supplementary Tables:

**Table S1. Comparison of importance factors for early (2007-2011) versus recent (2012-2013) adopters**

| Importance Factor | Recent Adopter Mean | Early Adopter Mean | t | df | p-value | 95% CI of Difference |
|-------------------|---------------------|--------------------|---|----|---------|----------------------|
| t Stat.           |                     |                    |   |    |         | Lower | Upper |
| Equality Assumed  | Unequal Var. Assumed|                    |   |    |         |        |       |
| Imp. of lower elec. costs | 4.602 | 4.551 | 0.956 | 624.13 | 0.339 | -0.054 | 0.157 |
| Imp. of protect increase in elec. prices | 4.642 | 4.415 | 4.197 | 769.98 | 3.0e-05*** | 0.121 | 0.333 |
| Imp. of protect environment | 3.746 | 3.901 | -1.824 | 595.61 | 0.069 (. ) | -0.322 | 0.012 |
| Imp. of increasing home value | 3.129 | 3.161 | -0.372 | 567.57 | 0.710 | -0.206 | 0.140 |
| Imp. of home easier to sell | 2.451 | 2.531 | -0.877 | 604.49 | 0.381 | -0.260 | 0.099 |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, * significant at 5% level, and ( . ) significant at 10% level
Table S2. Comparison of importance factors for early (2007-2009) versus recent (2012-2013) adopters

| Importance Factor                           | Recent Adopter Mean | Early Adopter Mean | t     | df | p-value | 95% CI of Difference |
|--------------------------------------------|---------------------|--------------------|-------|----|---------|----------------------|
| Imp. of lower elec. costs                  | 4.602               | 4.508              | 1.381 | 609.97 | 0.168 | 4.602, 4.508         |
| Imp. of protect increase in elec. prices   | 4.642               | 4.348              | 1.131 | 558.02 | 4.2e-05*** | 0.154, 0.434         |
| Imp. of protect environment                | 3.746               | 3.957              | -2.045| 620.02 | 0.041 * | -0.413, -0.008       |
| Imp. of increasing home value              | 3.129               | 3.098              | 0.285 | 611.09 | 0.776 | -0.178, 0.239        |
| Imp. of home easier to sell                | 2.451               | 2.599              | -1.314| 592.16 | 0.189 | -0.369, 0.073        |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, * significant at 5% level, and ( . ) significant at 10% level

Table S3. Comparison of demographics and political views of early (2007-2011) versus recent (2012-2013) adopters

| Demographics/Political Views                             | Recent Adopter Mean | Early Adopter Mean | t     | df     | p-value | 95% CI of Difference |
|---------------------------------------------------------|---------------------|--------------------|-------|---------|---------|----------------------|
| Age at time of adoption (years)                         | 56.913              | 56.598             | 0.385 | 473.70  | 0.701   | -1.297, 1.928        |
| Edu (years post secondary)                              | 4.881               | 5.103              | -2.172| 501.41  | 0.030 * | 4.881, 5.103         |
| Income ($1,000)                                         | 4.412               | 4.611              | -1.140| 385.61  | 0.255   | -0.542, 0.144        |
| Married (1=yes, 0=no)                                   | 0.875               | 0.871              | 0.15  | 546.89  | 0.881   | -0.042, 0.049        |
| Retired (1=yes, 0=no)                                   | 0.395               | 0.439              | -1.267| 539.82  | 0.206   | -0.112, 0.024        |
| Politics (1=very liberal to 8=very conservative)        | 4.488               | 4.355              | 0.905 | 479.74  | 0.366   | -0.156, 0.423        |
| Social Issues (1=very liberal to 8=very conservative)   | 3.858               | 3.760              | 0.662 | 464.07  | 0.509   | -0.193, 0.389        |
| Economic Issues (1=very liberal to 8=very conservative) | 4.847               | 4.855              | -0.059| 467.51  | 0.953   | -0.269, 0.253        |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, and * significant at 5% level
**Table S4.** Comparison of demographics and political views of early (2007-2009) versus recent (2012-2013) adopters

| H0: μ_recent = μ_early | Recent Adopter Mean | Early Adopter Mean | t | df | p-value | 95% CI of Difference |
|------------------------|---------------------|---------------------|---|----|---------|----------------------|
| Unequal Var. Assumed   | 56.913              | 56.605              | 0.313 | 532.98 | 0.755 | -1.631 | 2.248 |
| Age at time of adoption (years) |                  |                     |      |      |         |         |
| Edu (years post secondary) | 4.881 | 5.148 | -2.132 | 509.92 | 0.033 * | -0.514 | -0.021 |
| Income ($1,000) | 4.412 | 4.557 | -0.68 | 361.29 | 0.497 | -0.562 | 0.273 |
| Married (1=yes, 0=no) | 0.875 | 0.861 | 0.471 | 545.2 | 0.638 | -0.043 | 0.070 |
| Retired (1=yes, 0=no) | 0.395 | 0.473 | 1.848 | 554.46 | 0.065 (. ) | -0.160 | 0.005 |
| Politics (1=very liberal to 8=very conservative) | 4.488 | 4.206 | 1.587 | 508.17 | 0.113 | -0.067 | 0.633 |
| Social Issues (1=very liberal to 8=very conservative) | 3.858 | 3.625 | 1.306 | 498.72 | 0.192 | -0.117 | 0.583 |
| Economic Issues (1=very liberal to 8=very conservative) | 4.847 | 4.689 | 0.978 | 503.10 | 0.329 | -0.159 | 0.475 |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, and * significant at 5% level

**Table S5: **Comparison of political identity for early (2007 – 2011) and recent (2012-2013) adopters on economic issues, politics, and social issues

| “In general, how liberal or conservative are you on the following issues” | Economic Issues | Politics | Social Issues |
|--------------------------|-----------------|----------|--------------|
|                         | Early N = 520   | Later N = 511 | Early N = 524 | Later N = 517 | Early N = 521 | Later N = 512 |
| Very Liberal             | 3.7%            | 4.5%     | 7.4%         | 5.0%         | 14.8%         | 11.5%         |
| Liberal                  | 12.1%           | 6.1%     | 19.7%        | 14.9%        | 22.6%         | 17.4%         |
| Slightly Liberal         | 10.2%           | 6.8%     | 10.5%        | 7.9%         | 10.6%         | 9.8%          |
| Moderate                 | 15.4%           | 15.9%    | 17.4%        | 16.8%        | 14.0%         | 14.6%         |
| Slightly Conservative    | 13.1%           | 15.3%    | 7.3%         | 8.1%         | 7.3%          | 7.2%          |
| Conservative             | 19.8%           | 19.0%    | 17.6%        | 22.2%        | 14.8%         | 19.1%         |
| Very Conservative        | 17.7%           | 22.5%    | 8.8%         | 10.4%        | 7.3%          | 9.0%          |
| Libertarian              |                 |          |              |              |               |               |
| Don’t Know/Can’t Pick One Label | 8.1%  | 10%      | 7.1%         | 10.1%        | 8.7%          | 11.3%         |
### Table S6. Comparison of prompts sparking interest in solar for early (2007-2010) versus recent (2011-2013) adopters

| Prompt                                      | Late Adopter Mean | Early Adopter Mean | t    | df  | p-value 2-tailed | 95% CI of Difference |
|---------------------------------------------|-------------------|--------------------|------|-----|------------------|----------------------|
| Electricity rate increases                  | 0.427             | 0.334              | 3.253| 1142| 0.001 **         | 0.037 0.148          |
| Home Remodeling                             | 0.091             | 0.111              | -1.102| 1091| 0.271            | -0.055 0.015         |
| Talking to a solar homeowner as part of home tour | 0.014             | 0.041              | -2.73| 839 | 0.006 **         | -0.046 -0.008        |
| Retirement Planning                         | 0.236             | 0.259              | -0.883| 1116| 0.378            | -0.072 0.028         |
| Seeing a neighbor install solar             | 0.097             | 0.096              | 0.101| 1130| 0.920            | -0.032 0.036         |
| Talking to friends/family/coworkers with solar | 0.101             | 0.107              | -0.350| 1118| 0.726            | -0.042 0.029         |
| Talking to a solar company at a retail store | 0.059             | 0.084              | -1.654| 1048| 0.098            | -0.055 0.005         |
| Radio or TV advertisement                   | 0.123             | 0.066              | 3.379| 1141| 0.0008 ***       | 0.024 0.091          |
| Direct marketing                            | 0.185             | 0.143              | 1.97 | 1153| 0.049 *          | 0.001 0.085          |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, and * significant at 5% level

### Table S7. Comparison of prompts sparking interest in solar for early (2007-2011) versus recent (2012-2013) adopters

| Prompt                                      | Late Adopter Mean | Early Adopter Mean | t    | df  | p-value 2-tailed | 95% CI of Difference |
|---------------------------------------------|-------------------|--------------------|------|-----|------------------|----------------------|
| Electricity rate increases                  | 0.441             | 0.359              | 2.603| 653.50| 0.009 ***        | 0.020 0.143          |
| Home Remodeling                             | 0.082             | 0.108              | -1.433| 756.84| 0.152            | -0.062 0.010         |
| Talking to a solar homeowner as part of home tour | 0.011             | 0.034              | -2.622| 1065.83| 0.009 ***        | -0.039 -0.006        |
| Retirement Planning                         | 0.223             | 0.257              | -1.259| 704.75| 0.209            | -0.087 0.019         |
| Seeing a neighbor install solar             | 0.085             | 0.102              | -0.937| 727.61| 0.349            | -0.053 0.019         |
| Talking to friends/family/coworkers with solar | 0.088             | 0.111              | -1.231| 742.38| 0.219            | -0.060 0.014         |
| Talking to a solar company at a retail store | 0.076             | 0.068              | 0.476| 644.11| 0.634            | -0.025 0.041         |
| Radio or TV advertisement                   | 0.127             | 0.083              | 2.170| 575.31| 0.030 *          | 0.004 0.084          |
| Direct marketing                            | 0.175             | 0.161              | 0.568| 654.65| 0.570            | -0.034 0.061          |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, and * significant at 5% level
Table S8. Comparison of prompts sparking interest in solar for early (2007-2009) versus recent (2012-2013) adopters

| Prompt                                                                 | Late Adopter Mean | Early Adopter Mean | t     | df  | p-value 2-tailed | 95% CI of Difference Lower | 95% CI of Difference Upper |
|------------------------------------------------------------------------|-------------------|--------------------|-------|-----|------------------|----------------------------|----------------------------|
| Electricity rate increases                                             | 0.441             | 0.320              | 3.253 | 669.82 | 0.001 **          | 0.048                      | 0.194                      |
| Home Remodeling                                                       | 0.082             | 0.140              | -2.312| 606.31 | 0.021 *           | -0.104                     | -0.008                     |
| Talking to a solar homeowner as part of home tour                     | 0.011             | 0.038              | -2.182| 485.58 | 0.039 *           | -0.050                     | -0.003                     |
| Retirement Planning                                                   | 0.223             | 0.245              | -0.652| 658.80 | 0.515             | -0.086                     | 0.043                      |
| Seeing a neighbor install solar                                       | 0.085             | 0.091              | -0.281| 658.80 | 0.779             | -0.049                     | 0.037                      |
| Talking to friends/family/coworkers with solar                        | 0.088             | 0.094              | -0.291| 658.74 | 0.771             | -0.050                     | 0.037                      |
| Talking to a solar company at a retail store                          | 0.076             | 0.100              | -1.094| 638.20 | 0.275             | -0.067                     | 0.019                      |
| Radio or TV advertisement                                             | 0.127             | 0.063              | 2.884 | 643.26 | 0.004 **          | 0.021                      | 0.108                      |
| Direct marketing                                                      | 0.175             | 0.132              | 1.568 | 670.89 | 0.117             | -0.011                     | 0.098                      |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, * significant at 5% level

Table S9. Comparison of demographic and adoption factors for buyers and leasers

| Age at adoption (years) | Buy Mean | Lease Mean | t     | df | p-value 2-tailed | 95% CI of Difference Lower | 95% CI of Difference Upper |
|-------------------------|----------|------------|-------|-----|------------------|----------------------------|----------------------------|
| 56.8                    | 56.3     | 0.647      | 466.2 | 0.518 | -1.06            | 2.10                       |
| Edu (years post-secondary) | 4.64     | 4.23       | 2.91  | 479.4 | 0.003**          | 0.13                       | 0.67                       |
| Income ($1,000)          | 168.4    | 155.2      | 1.55  | 459.7 | 0.121            | -3.50                      | 30.0                       |
| Imp. of lower elec. costs | 4.58     | 4.50       | 1.41  | 470.0 | 0.158            | -0.03                      | 0.20                       |
| Imp. of protect increase in elec. prices                             | 4.43     | 4.58       | -2.44 | 566.8 | 0.015*           | -0.26                      | -0.02                      |
| Imp. of protect environment                                          | 3.89     | 3.78       | 1.36  | 506.1 | 0.173            | -0.052                     | 0.288                      |
| Imp. of increasing home value                                        | 3.20     | 3.03       | 1.90  | 488.6 | 0.058            | -0.006                     | 0.343                      |
| Imp. of home easier to sell                                          | 2.52     | 2.45       | 0.746 | 501.5 | 0.456            | -0.114                     | 0.255                      |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, * significant at 5% level, and ( . ) at 10% level

Table S10. Comparison of how buyers and leasers prioritize and/or perceive business model characteristics

| Savings in long run | Buyers Mean | Leasers Mean | t     | df  | p-value 2-tailed | 95% CI of Difference Lower | 95% CI of Difference Upper |
|---------------------|-------------|--------------|-------|-----|------------------|----------------------------|----------------------------|
| 4.279               | 3.574       | 9.259        | 489   | <2.2e-16 ****    | 0.555                      | 0.854                      |
| Easier process      | 3.997       | 4.187        | -2.664| 621  | 0.008 **         | -0.33                      | -0.05                      |
| Concern over contract length                                      | 2.155       | 2.608        | -5.246| 615  | <2.1e-7 ****     | -0.622                     | 0.283                      |
| Easier to sell home                                            | 3.36        | 2.585        | 9.057 | 605  | <2.2e-16 ****    | 0.607                      | 0.944                      |
| Business model choice of peers                                   | 3.426       | 2.597        | 8.56  | 445  | <2.2e-16 ****    | 0.638                      | 1.019                      |

Significance codes: *** significant at 0.1% level, ** significant at 1% level, * significant at 5% level, and ( . ) at 10% level
