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Pivot influence: CEO change and their focal domain

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ABSTRACT

The paper assesses how a CEO change of a firm and his/her respective focal domain influences the intensity of the firm's pivot. During the research, we derive two hypotheses based on a pivot and the various associated parameters. The first hypothesis is that a CEO change in the firm will create higher intensity to pivot within the firm. The second being that a higher intensity to pivot will occur if the CEO of a firm is a domain outsider rather than a domain insider. Furthermore, in examining the United States (US) photovoltaic (PV) industry, we found that contrary to the first hypothesis, there is a lower intensity to pivot for a firm when a CEO change occurs. For the second hypothesis, if the CEO is categorized into a focal domain (domain insider and domain outsider), we find that a firm has higher intensity to pivot if the CEO is a domain outsider.

Keywords— *Focal Domain, Pivot, Business Fundamentals*

1. INTRODUCTION

The current age of technological advancement is marked by constant evolution and dominant economic growth. In order to cope with this rapid development, firms around the world react in several ways. Some techniques such as increased market penetration and/or increased sales focus are employed by well-established firms. At the same time, start-ups sometimes try to pivot in order to gain market share or to get into completely new markets.

A pivot is primarily defined as a change in the firm's focus regarding business fundamentals and strategies (Kirtley & O'Mahony, (2020). To be more economically viable or improve performance under current market conditions, the firm pivots by shifting to new products, services, and/or strategies. Companies not only pivot to react to changes in the economic environment but also to bring about groundbreaking and/or disruptive changes. Several factors affect a firm's intensity to pivot, the possibility of a pivot, and its success. The study of these factors is beyond the scope of this paper.

Organizations across the globe ensure stability through well-grounded and reliable management led by a CEO. A CEO not only makes the decisions for a firm but creates a culture of change and development (Hambrick, 2007; Hambrick & Mason). The strategic management theory of upper echelons, which elucidates the importance of a CEO, proves to be useful for our study (Donald C. Hambrick and P. Mason in 1984).

This paper has taken the solar-panel industry as the field of study (focal domain). The constant innovation in the solar-panel sector is a testament to its ever-changing nature and its inherent nature of possibility of a pivot. For the study of this paper, CEOs have been categorized as domain outsiders (those that are experts in areas apart from the focal domain) and domain insiders (those who are well-versed in the current domain) (Hannah & Eisenhardt, 2018). This study involves observing changes in the CEO of a firm in the solar industry, monitoring the firm's intensity to pivot, and noting the domain of expertise of the CEO.

The rest of this paper continues in the following manner.

First, we review literature that revolves around pivot intensities and the importance of CEOs. Simultaneously, we establish the solar panel industry as our medium of study. We go on to develop a hypothesis that dictates a relationship between a firm's intensity to pivot and a change in the CEO. Next, we explore this hypothesis by presenting another hypothesis; a relationship between a firm's intensity to pivot and the CEO being a domain insider and outsider. Appropriate calculations have been performed and presented in an orderly manner. Finally, we display our results and relate them to our hypotheses.

1.1 Literature Review

The model of categorization of a pivot has been adopted from a research paper of N.R.Furr: Furr et al. (2012), who influences a change in the course of domain knowledge and novel framing in making technology changes.
In this paper, we argue that a firm will have a successful technological change when a CEO changes in a firm. Further, the CEO might not be accomplished in the industry associated with the given firm.

The word pivot is very ubiquitous in the current era of entrepreneurship. When a company pivots, it refers to a shift in strategies, services, or products in the corporate world. But, we say a company has pivoted when the company's fundamentals have changed or there essentially has been a 'major' shift in the firm.
Based on the readers' perspective, the fundamentals of a company can have different meanings. Here, fundamentals refer to the technology the firm is using to deploy its product/services. This technology can potentially define the fundamentals and the business model of the firm. Thus, it is taken as the factor of change. This has been further explained, with particular attention paid to the solar panel industry.

The model of categorization of the pivot into its different intensities can be divided into three levels; major, moderate, and minor.

- Major Change: A major change occurs when a company changes its fundamentals by entirely destroying its current competency. For example, a software company converting to the production of hardware.
- Moderate Change: A moderate change is when the company has altered the deployment of its products and services and has undergone some amount of competency destruction or enhancement for the particular change. For example, a cell phone company starts selling headphones with its current product (cellphone).
- Minor Changes: This type of change is not a significant change for a pivot, as minor changes are in the same field of the current product/service and can be an up-gradation or degeneration.

1.2 Importance of CEO

The strategic management theory of upper echelons states that 'organizational outcomes are partially predicted by managerial background characteristics of the top-level management team'(Donald C. Hambrick and P. Mason in 1984.) This theory can be used in human resource management and to predict the future strategic decisions of CEOs. It is used to predict CEOs' calculated decisions based on their personalities and the characteristics that define them. In this paper, we will use this theory to determine a CEO's influence on the firm. The application of the upper echelons theory in this paper involves suggesting the theory that CEOs hold the most power within a firm and act as the primary decision-makers. Thus the CEOs' decision-making capabilities greatly influence the organization they lead (Hambrick, 2007; Hambrick & Mason, 1984; Marieke Huysentruyt, M., Stephan, U., & Vujić, S. (2015, March 15)).

CEO change in a company can have a two-fold impact. As we have seen, a CEO plays a significant role in deciding a company's fundamentals. Thus, a new CEO can have a positive or negative influence on the company. This, in turn, might affect a company's intensity to pivot. A new CEO can bring about changes in the business fundamentals, pushing the company in a new direction, resulting in a pivot at different intensities. The success of the pivot is heavily dependent on the CEO's strategic management and calculation skills.

From the aforementioned literature, we can conclude that CEOs exert a tremendous influence over a firm's decision-making. Therefore, we can also say that a change in CEO can bring about unorthodox opinions that affect the business fundamentals of the firm and result in a pivot at different intensities. We derive our first hypothesis based on a pivot and CEO change.

Hypothesis 1: *A change in the firm's CEO will create a higher intensity to pivot within the firm.*

We further categorize the CEO based on their work experience in the field that they are leading the company. Based on this, we organize them into domain (field) insiders or domain outsiders. N.R Furr ultimately influences the methodology of domain insider/domain outsider as done in his research paper: Furr et al. (2012) - who influences a change in the course of the role of domain knowledge and novel framing in making technology changes.

Domain Insiders

As the name suggests, domain insiders are experts who have excellent knowledge of the field the firm is operating in. This gives them an advantage of practical problem tackling in their respective domain. They enhance the firm's competency if it faces disturbances, leading to a change in business strategies. Thus domain insiders avoid pivots that result in competency destroying within the firm (Furr et al 2012). Instead, they can prefer to choose a company-enhancing option. As discussed earlier, a major pivot can happen only when there is incredible destruction of competency. Therefore, domain insiders involve themselves only in minor, or to some extent, moderate pivots, which are accommodated by competency enhancing within the firm.

Domain Outsiders

In contrast, domain outsiders have significant experience and diverse expertise in different domains, except for the focal domain. This might change the way the firm processes disturbances. The domain outsider brings a novel perspective to tackling the disruption. As domain outsiders come from different areas, they might bring changes that the industry/firm hasn't seen. Domain outsiders do not have the same attachment to the particular domain as domain insiders. As a result, they look for successful pivots, in turn, pivots which competency is destroying options. As discussed earlier, competency destroying results in the pivot at different intensities based on the amount of destruction. From the above literature, we can derive our second hypothesis by categorizing the CEO into domain outsiders and domain insiders.

Hypothesis 2: *A higher intensity to pivot will occur if the CEO of a firm is a domain outsider rather than a domain insider.*

1.3 Solar Panel Industry

The solar industry today is one of the most advanced industries of its time. With ever-evolving technologies on solar energy optimizations and solar cells, there is plenty of scope for growth in the solar industry for the foreseeable future.

Due to the rapid changes in the technology applicable to the solar industry, many companies are coming up with different technologies, resulting in higher intensity of competition among companies. In the past, the solar industry was characterized as an oligopoly (an economic concept that categorizes companies based on the competition between them, on factors such as demand and supply). However, recently, many startups have been coming up in this sector, thus re-categorizing these companies' competition under monopolistic competition.

The companies in this industry pivot to new technologies or shift from hardware to software, the furthest creating a new service in the same field. Thus, providing the primary factor for pivoting. Supportive government policies and regulations have also helped the rise of many industries in the PV sector. The United States solar investment tax credit (ITC) increased from 10% to 30% (revised in 2005 - 2009). Under the revised ITC, there is no maximum limit to the incentive to claim solar projects. However, the owner must maintain the project for a minimum of 5 years; else, the government reclaims the portion of the credit which was availed during the years of ownership.

The energy (DOE) department has also developed a renewable energy loan guarantee program in 2009. DOE supports the commercial development of innovative clean energy technologies through its loan programs office (LPO) and can also guarantee loans for up to 80 per cent of total project costs (for eligible proposals). This has resulted in a substantial increase in investment and innovation in the solar PV sector. These supportive governments have resulted in the coming up of many new companies in this sector.

We have taken the solar panel industry to prove our hypothesis because of the high technological advancements in the sector. The sector has a significant number of start-ups coming up with new technologies and this in turn results in the creation of competition. Moreover, this competition creates significant technological changes within the industry, making it an ideal area for research in pivots and its influence.

2. RESEARCH METHODS

Data 1

The data for different pivot intensities has been gathered from the official websites of the respective firms to get a better knowledge of the current technologies used by the firm. Sources such as GreenTech media, solar power world, PV magazine, SEIA (Solar Energy Industries Association), PV-tech, Crunch-Base, provided information on the technologies and news/articles on new technologies introduced by the firm. Thus, helping in comparing the current technology and the technology provided to calculate the intensity of the change based on the aforementioned pivot categorization model. (Furr et al., 2012).

Data 2

The data for the change of CEO and their respective domains have been gathered from the individual CEO LinkedIn profiles, news articles, and Crunch Base. We have also looked into the company's official websites to find more about changes in executives and their respective history. The following data helped us identify CEO changes and further categorize them into domain outsiders and insiders based on the categorization model mentioned above.

Dependent Variable

Pivot: Pivot can be categorized based on the intensity of the change. And the intensity of change itself can be classified as major, moderate, or minor. We measured if a PV firm had pivoted by searching major industry periodicals. We categorized the pivot as major, moderate, and minor (explained before). If a firm had a major pivot, we coded it as '2', if moderate, then coded as '1', and if minor '0'. This helped us in coding the intensities of a pivot from major to minor.

Independent variable

CEO change: From the data mentioned, we found the current CEO of the different companies and looked at a CEO change in the same period of a pivot occurrence; thus, both pivot occurrence and CEO change were all looked at over a period of 5-6 years. If there were a change in CEO, keeping in mind the pivot occurrence in that period of change, we would code it as '1', if not '0'.

Domain: We looked at the domain of the CEOs and further categorized them into domain insider and outsider (using the model as mentioned earlier of categorization into the respective domain). The domain of only the CEOs that brought about the pivot in the respective company was looked at. Thus, only domains of the current CEOs that brought about the pivot occurrence in the period above were considered.

- Domain Insider: If the current CEO was a domain insider, then coded as "1" if not "0".
- Domain Outsider: If the current CEO was a domain outsider, then coded as "1" if not "0".

Model

To uncover the data, we used linear and multiple regression to analyze our variables and their causal relationships.

3. RESULTS

Results from our complete regression are listed in the tables below. None of them were significant predictors of a firm's pivoting intensity in terms of our control variables.

Analysis 1

Linear Regression	
Dependent variable	Pivot
Independent variables	CEO Change
N	22

Table 1: Regression results for different intensities of pivots on CEO change

Model	Coefficients	StdErr	t Stat	Beta	p-value
(Intercept)	1.38462	0.19578	7.07228	-	7.41E-07
CEO Change	-0.49573	0.3061	-1.61951	-0.34049	**0.121**

From Table 1, in terms of our independent variable, we see that the linear term is not a statistically significant commonly accepted threshold for significance (p >.1). Still, the *p-value* for CEO change is (p >.15).

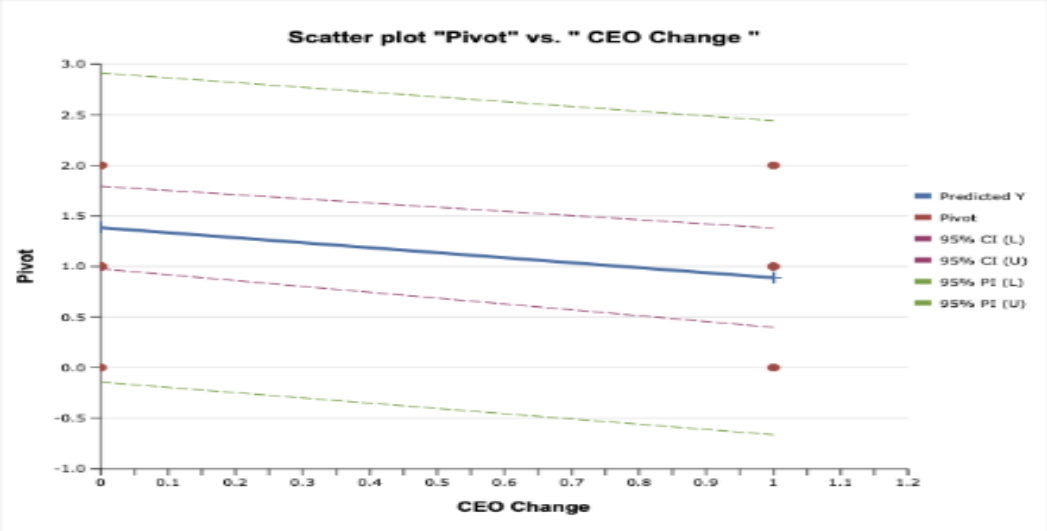

Figure 1: Scatter plot of intensities of the pivot and CEO change (CI - 95% Confidence Interval, PI - 95% Prediction Interval)

There lies a correlation between CEO change and the intensity to pivot in firms. From Figure 1, we can say that there lies a negative correlation between the two variables. We can conclude from the above regression and the correlation that the intensity to pivot decreases when there is a higher chance of a firm's CEO changing. Inturn disproves our *hypothesis 1*

Analysis 2

Multiple Regression	
Dependent variable	Pivot
Independent variables	CEO Change, Domain Insider, Domain Outsiders
N	22

Table 2: Regression results for different intensities of pivots on independent variables

Model	Coefficients	StdErr	t Stat	Beta	p-value
(Intercept)	1.5	0.36851	4.0704	-	0.00072
CEO Change	-0.5	0.36851	-1.3568	-0.34343	**0.19162**
Domain Insider	-0.05556	0.50647	-0.10969	-0.03816	**0.91387**
Domain Outsiders	-0.22222	0.45962	-0.48349	-0.15264	**0.63457**

From Table 2, it is worth noting that the linear terms are not statistically significant at any commonly accepted threshold for significance (p >.15). However, meaningful conclusions can be drawn from the above data due margin of difference between the different independent variable's p-values. As discussed in analysis 1, the multiple regression runs on the data. It can conclude that a change of CEO will have the most impact on the intensity of pivot (negatively correlated). However, if we further categorize the CEO under domain insider and outsider. We can derive a relationship that there exists a higher intensity to pivot if the CEO is a domain outsider (P = 0.63) than when the CEO is a domain insider (P = 0.91).

It is also worth noting that there does appear to be a marginally significant relationship between change in CEO and intensity to pivot, even after accounting for the different independent variables. The multiple regression proves hypothesis *2*

As the data and regression run above might provide significant conclusions, we suggest that this may be a function of the current state of our data collection efforts. Specifically, we ran our regression on a relatively small sample size (n = 35), which may not be sufficiently large to provide robust results. Future work should involve refining these analyses with larger sample sizes to observe whether these effects grow or shrink in the process.

4. CONCLUSION

The paper's main objective is to determine the intensity to pivot when a CEO changes within the firm and further find the intensity to pivot if the new CEO is domain insiders or domain outsiders.

In the course of the paper, we used two models of categorization, one for pivot and one for domain insider and outsider(Furr et al. (2012). We further used the statistical linear and multiple regression model to find a relationship between the pivot and the different parameters (CEO change, domain insiders, domain outsiders).

We derived two hypotheses based on a pivot and the different parameters. The first hypothesis is that a CEO change in the firm will create higher intensities to pivot within the firm. The second is that a higher intensity to pivot will occur if the CEO of a firm is a domain outsider rather than a domain insider.

Both our hypotheses were not accepted due to insignificant results on the statistical model. We found a negative relationship (correlation) between the pivot and CEO change from the first analysis. We found a higher intensity to pivot from the second analysis if the CEO belongs to a domain outsider than a domain insider. Therefore, we can conclude that it is necessary to have a stable CEO and the CEO being domain outsiders to have a high intensity to pivot.

Future work should involve refining these analyses with larger sample sizes to observe whether these effects grow or shrink in the process.

5. REFERENCES

[1] Bade, G., & Trabish, H. (2016, May 05). SolarCity unveils new software services for UTILITIES, grid operators. Retrieved April 10, 2021, from https://www.utilitydive.com/news/solarcity-unveils-new-software-services-for-utilities-grid-operators/418657/

[2] Batteries International. (2015, May 10). CODA Energy hires Detering as new CEO. Batteries International. https://www.batteriesinternational.com/2015/05/10/coda-energy-hires-detering-as-new-ceo/.

[3] Énergir announces the nomination of Mari McClure as President and CEO of Green Mountain Power. Énergir announces the nomination of Mari McClure as President and CEO of Green Mountain Power | Énergir. (2019, September 30). https://www.energir.com/en/about/media/news/nomination-mari-mcclure/

[4] Exec Team: Smarter Grid Solutions. Smarter Grid. (n.d.). https://www.smartergridsolutions.com/about/exec-team/.

[5] Furr, N. R., Cavarretta, F., & Garg, S. (2012). Who changes course? The role of domain knowledge and novel framing in making technology changes. Strategic Entrepreneurship Journal, 6(3), 236-256. doi:10.1002/sej.1137

[6] Fine, H. (2015, March 26). Verengo Co-Founders Exit Leadership Posts; Marketing Exec New CEO. Verengo Co-Founders Exit Leadership Posts; Marketing Exec New CEO | Los Angeles Business Journal. https://labusinessjournal.com/news/2015/mar/26/verengo-co-founders-exit-leadership-posts-marketin/#:~:text=Taking%20over%20as%20Verengo%20chief,of%20acne%20treatment%20Proactiv%20Solution.

[7] Green Lantern solar and healthy Living Market collaborate once again. (1970, January 01). Retrieved April 10, 2021, from https://vermontbiz.com/news/2020/october/31/green-lantern-solar-and-healthy-living-market-collaborate-once-again

[8] Green Lantern solar and bee the Change partner again. (1970, January 01). Retrieved April 10, 2021, from https://vermontbiz.com/news/2020/july/02/green-lantern-solar-and-bee-change-partner-again

[9] Gearino, D. (2020, November 30). Inside clean Energy: Sunrun and Vivint form new Solar Goliath, LEAVING Tesla to Play David. Retrieved April 10, 2021, from https://insideclimatenews.org/news/09072020/inside-clean-energy-california-rooftop-solar-tesla-sunrun/

[10] Green charge networks Partner Itochu corporation to expand storage SOLUTIONS GLOBALLY. (2017, January 27). Retrieved April 10, 2021, from https://energystorageforum.com/news/green-charge-networks-partner-itochu-corporation-expand-storage-solutions-globally

[11] Green Mountain Power Files Plans to Offer Tesla Powerwalls to Customers. (2015, December 8). Retrieved April 10, 2021, from https://www.tdworld.com/distributed-energy-resources/article/20965959/green-mountain-power-files-plans-to-offer-tesla-powerwalls-to-

customers#:~:text=Green%20Mountain%20Power%20is%20the,lease%20with%20no%20upfront%20cost.&text=GMP%20is%20the%20first%20utility,Tesla%20to%20offer%20the%20Powerwall.
[12] GreenCom networks ag acquires easyoptimize GmbH - 2019-05-05 - CRUNCHBASE ACQUISITION PROFILE. (n.d.). Retrieved April 10, 2021, from https://www.crunchbase.com/acquisition/greencom-networks-ag-acquires-easyoptimize-gmbh--63c18896
[13] Hambrick, Donald C, & Mason, P. A. (1984). Upper Echelons: The Organization as a Reflection of Its Top Managers. Academy of Management Review, 9(2), 193-206. Academy of Management. DOI: 10.2307/258434.
[14] Hambrick, D C. (2007). Upper echelons theory: An update. Academy of Management Review,32(2), 334-343. Academy of Management. DOI: 10.2307/20159303.
[15] Inc., G. E. L. (2013, October 16). Founder of Xtreme Power, Michael Breen, Joins GELI as CEO to Solve Microgrid Financing. Co. https://www.prnewswire.com/news-releases/co-founder-of-xtreme-power-michael-breen-joins-geli-as-ceo-to-solve-microgrid-financing-228024731.html.
[16] John, J. (2020, June 25). Sunrun taps AutoGrid to Optimize grid services for its growing fleets of home batteries. Retrieved April 10, 2021, from https://www.greentechmedia.com/articles/read/sunrun-taps-autogrid-to-optimize-its-growing-fleets-of-home-batteries
[17] John, J. (2020, August 07). First solar to sell O&M business to NovaSource, still SEEKING sale of project development arm. Retrieved April 10, 2021, from https://www.greentechmedia.com/articles/read/first-solar-to-sell-om-business-to-novasource-still-seeking-sale-of-project-development-arm
[18] John, J. (2020, December 11). Swell readies $450M in financing For SOLAR-PLUS-BATTERY virtual power plants. Retrieved April 10, 2021, from https://www.greentechmedia.com/articles/read/swell-readies-up-to-450m-in-financing-for-solar-battery-virtual-power-plants
[19] Kirtley, Jacqueline & O'Mahony, Siobhan. (2020). What is a Pivot? Explaining When and How Entrepreneurial Firms Decide to Make Strategic Change and Pivot. Strategic Management Journal. 10.1002/smj.3131.
[20] Leadership. First Solar. (n.d.). https://www.firstsolar.com/About-Us/Leadership.
[21] Marieke Huysentruyt, M., Stephan, U., & Vujić, S. (2015, March 15). Chaire EPPP. Chaire EPPP – Économie des Partenariats Public-Privé. http://chaire-eppp.org/files_chaire/huysentruyt_stephan_and_vujic_march_2015.
[22] Max Minzner Joins Arcadia Power as General Counsel. Business Wire. (2019, October 15).
[23] https://www.businesswire.com/news/home/20191015005238/en/Max-Minzner-Joins-Arcadia-Power-General-Counsel#.
[24] Person. (2016, May 11). Smarter Grid Solutions appoints new chief executive. Network Magazine. https://networks.online/people-skills/smarter-grid-solutions-appoints-new-chief-executive/.
[25] Perry, J. (2012, February 10). N.J.'s largest solar panel installer opens new headquarters. NJBIZ. https://njbiz.com/n-j-s-largest-solar-panel-installer-opens-new-headquarters/.
[26] Peterson, R. S., Smith, D. B., Martorana, P. V., & Owens, P. D. (2003). The impact of chief executive officer personality on top management team dynamics: one mechanism by which leadership affects organizational performance. Journal of Applied Psychology, 88(5), 795-808. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/14516245
[27] Power, A. (2019, July 24). Arcadia Power Appoints Kate Henningsen to Chief Operating Officer. https://www.prnewswire.com/news-releases/arcadia-power-appoints-kate-henningsen-to-chief-operating-officer-300890278.html.
[28] PricewaterhouseCoopers. (n.d.). Christian Feisst. PwC. https://www.strategyand.pwc.com/gx/en/alumni/featured-alumni/eu/christian-feisst.html.
[29] Shieber, J. (2020, July 14). ClassPass co-founder Sanjiv Sanghavi joins Arcadia, bringing consumer marketing savvy to clean energy. TechCrunch. https://techcrunch.com/2020/07/14/classpass-co-founder-sanjiv-sanghavi-joins-arcadia-bringing-consumer-marketing-savvy-to-clean-energy/.
[30] Spector, J. (2019, November 18). AMS Names New CEO as Software Product Gains Traction. Greentech Media. https://www.greentechmedia.com/articles/read/ams-names-new-ceo-as-software-product-gains-traction#:~:text=AMS%2C%20the%20commercial%20energy%20storage,five%20years%20at%20the%20helm.
[31] Summit ridge ENERGY TAPS Arcadia power to help with customer acquisition for community solar. (2020, July 20). Retrieved April 10, 2021, from https://srenergy.com/news/summit-ridge-energy-taps-arcadia-power-to-help-with-customer-acquisition-for-community-solar/
[32] Sunnova and petersendean partner to Deliver integrated solar solutions to California Homebuilders. (2019, August 14). Retrieved April 10, 2021, from https://www.businesswire.com/news/home/20190814005547/en/Sunnova-and-PetersenDean-Partner-to-Deliver-Integrated-Solar-Solutions-to-California-Homebuilders
[33] Sunrun. (2021, April 20). Sunrun solar executive team. Sunrun. https://www.sunrun.com/about/our-team.
[34] Seth Frader-Thompson, President, EnergyHub. Center For Digital Strategies. (n.d.). https://digitalstrategies.tuck.dartmouth.edu/video/seth-frader-thompson-president-energyhub/#:~:text=Prior%20to%20founding%20EnergyHub%2C%20Seth,Ordnance%20Disposal%20(EOD)%20robots.
[35] Randazzo, R. (2016, April 28). First Solar CEO stepping down, to be replaced by CFO. The Arizona Republic. https://www.azcentral.com/story/money/business/energy/2016/04/27/first-solar-ceo-stepping-down-replaced-cfo/83625508/.
[36] Theboss. (2017, April 21). Energy storage and solar industry benefits as GELI launches new tool. Retrieved April 10, 2021, from https://www.energymatters.com.au/renewable-news/energy-storage-solar-industry-geli-em6006/
[37] Theron-Ord, A. (2016, July 13). PG&E and Solarcity partner to BOOST grid stability. Retrieved April 10, 2021, from https://www.smart-energy.com/regional-news/north-america/pge-solarcity-grid-stability/

[38] Volkov, M. (2020, February 28). The Impact of a New CEO. Corruption, Crime & Compliance.https://blog.volkovlaw.com/2020/02/the-impact-of-a-new-ceo/#:~:text=A%20new%20CEO%20can%20bring,an%20organization%20in%20successful%20direction.
[39] Wesoff, E. (2011, June 13). Google goes $280M long on Solar rooftops With SolarCity. Retrieved April 10, 2021, from https://www.greentechmedia.com/articles/read/google-goes-long-on-pv-with-solarcity
[40] Wesoff, E. (2016, May 17). Is the third time a charm FOR Coda's energy Storage Business? Retrieved April 10, 2021, from https://www.greentechmedia.com/articles/read/is-the-third-time-a-charm-for-codas-energy-storage-business
[41] Theboss. (2017, April 21). Energy storage and solar industry benefits as GELI launches new tool. Retrieved April 10, 2021, from https://www.energymatters.com.au/renewable-news/energy-storage-solar-industry-geli-em6006/
[42] Theron-Ord, A. (2016, July 13). PG&E and Solarcity partner to BOOST grid stability. Retrieved April 10, 2021, from https://www.smart-energy.com/regional-news/north-america/pge-solarcity-grid-stability/

