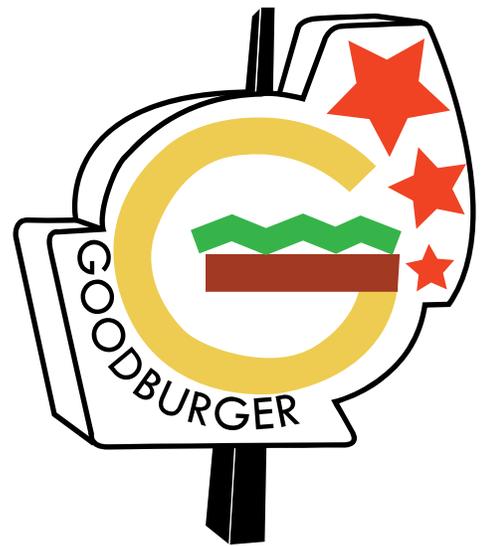
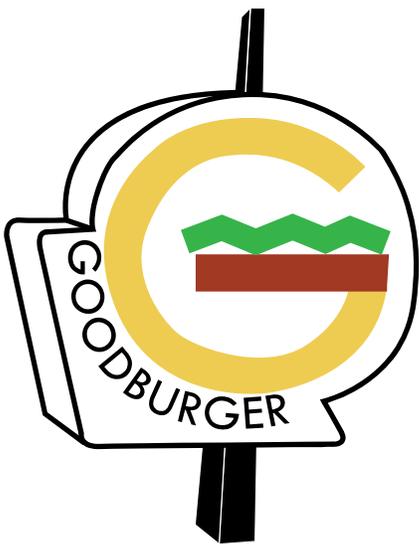


Team Crown Joules
A Side of Savings



Executive Summary

Quick service restaurant franchise Good Burger has set an energy reduction target of 10% by 2020 across all company owned locations, and is considering strategies by which to reduce energy consumption in franchised locations as well. Our analysis of the appliance landscape and pace of technological progress within the quick dining industry indicates that a 10% reduction of energy consumption over the 15 year target horizon will be approached simply as a function of marginal efficiency increases in new product generations, and therefore the reduction target appears conservative from a technical perspective. However, the large and complex network of franchisees presents a variety of barriers to adoption, which is the primary hurdle to achieving system-wide reductions of this magnitude. The low cost of energy as a percentage of total operating expenses creates little incentive for franchisees to prioritize energy reductions.

We recommend a strategy that focuses on the natural strengths of the franchisor/franchisee relationship by bundling proven revenue-drivers with efficiency improvements, and promoting participating locations as premium Good Burger restaurants.

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- Premium locations must meet several minimum requirements, including offering WiFi, dining area design standards, menu offering, and improved energy efficiency.
 - A substantial marketing campaign promoting the features of premium locations adds value to early adopting franchisees, and will encourage others to participate.
 - A high value/low cost scale of prioritizing replacements and improvements is used in the transition to lower overall store energy consumption.
 - Company locations serve as pilots to demonstrate changes in traffic, average receipt, and energy savings with different materials combinations and varying degrees of investment.
 - Pilot store information is released to all franchisees, who desire proof of the financial effects of opting into such programs.
 - Financing for upgrades at all premium locations is secured at favorable rates with assistance from the company, and new materials are discounted due to bulk wholesale purchasing.
 - Regional lending and tax incentives for decreasing consumption reduce the cost of capital.
 - The company may choose to finance upgrades for certain franchise locations that elect not to participate in the program and collect the difference in cash flows.
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Investments in energy efficiency are fundamentally methods of improving profit margin. At below 5% of total operating expenses for Good Burger restaurants, energy consumption is not a focal point in improving overall property and equipment internal rate of return for many franchisees. In order to call greater attention to energy efficiency under the present conditions, conservation measures must be seen by the franchisee as positively correlated to sales.

We believe that including energy efficiency standards as part of a corporate initiative ultimately aimed at increasing competitive advantage and driving revenue is a highly effective strategy for encouraging adoption of energy conservation measures. This method of implementation allows Good Burger to leverage core competencies on both the corporate and franchise levels. Proposed herein is one such solution, but we believe this concept is generally applicable to many initiatives targeting sales growth and should be optimized depending upon the firm.



Introduction

The Good Burger quick service restaurant (QSR) chain consists of 10% company owned stores and 90% franchisees distributed geographically throughout the nation. Good Burger annual unit sales of \$750,000 are slightly higher than the national QSR industry average. Variations in owner preferences and management style imply that franchises have a wide range of location-specific attributes while distributing the same standardized food products. In order to increase long-term revenues from franchisees, the corporate office is hoping to initiate energy savings measures across all locations.

The technology by which to meet these energy reduction targets is well-established, yet the corporate offices of QSR franchises have had difficulty encouraging franchisees to adopt such measures nationwide. Energy efficient building materials and appliances currently exist to exceed the stated reductions goal of 10%, reinforcing the notion that the primary challenge is not technology or financing. A sophisticated and experienced franchise owner anticipating long-term operation of the location is capable of identifying the financial benefit of energy efficient fixtures and investing accordingly.

Meeting or exceeding the target consumption reduction throughout Good Burger locations is fundamentally a challenge of franchise incentives and adoption. This suggests that the logical solution is to present franchisees with the opportunity to further leverage internal strengths and bolster these efforts through increased support from the corporate level, while simultaneously taking the actions necessary to drive revenue growth and implement energy conservation measures (ECM) necessary to sustain higher long-term profitability.

This proposal recommends a voluntary initiative in which measures intended to drive revenue growth are coupled with energy reductions. A simple means by which to achieve this is to bundle minimum levels of desired changes and require franchisees to meet this standard in order to qualify for a desired incentive. In this case, we have proposed branding as premium locations so as to allow customers to visibly identify locations with particular features to the customer.

Revenue Growth: Expanding Value Offering and Recognition Amongst Customers

Trends in the domestic QSR dining consumer base demonstrate marginal elasticity for environmentally conscious restaurant chains, but are limited to certain regions and demographics. This aspect is therefore unlikely to serve as a strong cornerstone for value in the eyes of most customers nationwide. However, there is fairly systemic growth in customer preference for chains offering premium menu items such as salads, wraps, and high-end beverages such as real fruit smoothies and gourmet coffee. More demographics have also come to expect location benefits such as complimentary WiFi, which has been shown to improve customer time at the location and average receipts per visit. The corporate office alone has the ability to promote these features as well as the traditional menu offering, creating a disincentive for franchisee investment and innovation in some cases owing to a known lack of transference to target consumer awareness. This kind of premium experience can dovetail into pressure for franchisees to adopt the energy efficiency standards required by the program.

Though many customers may be perfectly content with the present Good Burger dining



experience and menu offering, expanding market share requires expanding the reach of brand appeal, converting other QSR diners through unique value offerings, and retaining the existing customer base. Though highly particular or infrequent QSR diners are unlikely to fully adopt brand loyalty in the near term, providing appeal through niches can be a highly effective method of differentiation in competitive industries such as quick service restaurants. The new category of locations guarantees modern conveniences, quality amenities, and high-end menu items. A clear identifier of access to these luxuries such as a subtle addition to the company logo or unique identification in digital maps can have an immense difference on restaurant choice for non-local customers choosing between restaurants.

A slight branding modification such as “Good Burger★” (read “star”) may be advisable due to connotations with above average performance, applicable in this instance to energy performance and customer-facing amenities, as well as the soft reference to voluntary EPA program ENERGY STAR. A directional approach of this nature was initially favored to logos incorporating a globe in the buns or a leaf in the design due to the fact that very few people have a negative perception of “efficiency” or “performance,” associating these words instead with more productive deployment of resources.

Furthermore, the addition of a character means that the company will never have to change the restaurant name, as the change is only visible on the masthead outside the restaurant, on highway signs, and when consumers look up the location from a mobile device or computer. The Good Burger logo should not be changed on any packaging due to the fact that this would require additional resources, complicate supply chain management, and may also violate franchise agreements with non-participating franchises. The modification is intended solely for brand identity and visibility across consumers, and should be simple enough so that they do not need to “re-recognize” the entire restaurant brand, but rather look for a small indication of whether these certain characteristics are guaranteed to be offered at the location.

Many energy efficiency initiatives have successfully launched bold marketing campaigns, and a “Certified Green” standard has even been released to allow restaurants meeting certain energy consumption criteria to identify themselves to eco-conscious customers. Fair trade certifications have followed a similar course, indicating that these are factors in purchasing within certain demographics. (Franchise Direct) Promotional materials from the corporate office or LEED such as window stickers and other information showing that the location is reducing energy consumption may be considered, but to date have been somewhat ineffective at driving revenue growth across the industry, and should be seen only as a potential add-on for the present strategy.

Customer sensitivity to factors such as environmental impact are highly relevant in determining the message conveyed to consumers in marketing, as well as the ambiance of the Good Burger★ restaurants. Similar principles apply for emphasis upon health conscious or high-end menu items and price sensitivity. This implies that regional or demographic-specific marketing and location themes should be considered in order to maximize sales. Conversely, the nationally ubiquitous desire for internet access and electronics charging makes these factors demographically agnostic.

Skylights were suggested as a standardized Good Burger★ design component, uniquely identifying the ambiance of these locations and reducing lighting costs. Natural light has been shown to decrease absenteeism, increase employee productivity, and improve sales. Though this may be a potential option, we would advise that any standardized characteristics be evaluated thoroughly, as some may only be advisable in certain regions. In the case of skylights, the



loss of insulation may be disproportionate to the benefits in areas with extreme temperatures or 24-hour locations, as temperature drops at night.

Independent of demographic specific marketing or interior design, corporate-level planning of the Good Burger★ marketing campaign should clearly demonstrate to the public that the store locations are now far more efficient, in addition to offering an expanded menu and customer experience benefits. Small, low-cost design improvements in the lobby will also serve as an indication that the particular franchise has a unique and modern component to the entire structure, alluding to contemporary energy practices.

An important aspect of filling niches is focus upon locating these particular restaurant units. Local customers are likely to either hear about or experience firsthand the superficial changes at any restaurant location. Prospective customers without a local affiliation are now most likely to either spot restaurants from their vehicle or search for them on a mobile device, as over 60% of American consumers now own a smartphone. Given the sought-after lobby features such as internet access and outlets, many travelers will likely seek out Good Burger★ restaurants over other QSD locations at which these features may vary.

Sources of Savings: Technological Improvements

Dramatic changes in location layout or equipment would likely be met with resistance from franchisees, and immediate reinvention of locations across the entire chain is not only prohibitively expensive, but is entirely unnecessary to exceed the stated reduction target. Ensuring that insulation, lighting, appliances, and other low-cost, less disruptive property components are improved to high-efficiency materials is the first priority in the short term.

The corporate target of 10% reduction in energy consumption between 2004-2020 is likely to be approached or surpassed by the natural rate of technological advancement in equipment and facilities materials across 16 years. This will enable price to remain virtually unchanged as a percentage of expenses for superior efficiency input replacement, provided energy consumption is used as a criteria in materials purchasing decisions (California Energy Commission). With concentrated efforts and franchise cooperation, the corporate target can be exceeded easily by 2020, as evidenced by the 8.73% reduction in utilities costs that McDonald's China achieved in 2009 alone.

The capital improvements required to outperform this target are well established, and have been verified with a high degree of confidence by several reputable agencies, including the Pacific Northwest National Laboratory, the National Renewable Energy Laboratory, Halton Foodservice, and Fisher-Nickel, as well as precedent initiatives at other QSRs. Many such findings were summarized in a Pacific Northwest National Laboratory report issued in September 2010, which details cost effective ways for quick service restaurants to remain compliant with and exceed the guidelines set forth in 2004 for ANSI/ASHRAE/IESNA Standard 90.1. We believe that the technical aspects of realizing energy savings in fast dining are improving, leaving large scale adoption as the primary barrier to realizing these efficiency targets.

The QSR industry is a well-oiled machine which has scientifically optimized the food production processes, and therefore the implementation of energy reduction strategies must be ranked by the



cost and amount they disrupt the franchise location.

- i. The first priority is reduction of energy load, achieved through *envelope and lighting based improvements* such as insulation, windows, and lighting. These changes affect the workings of the business the least, but can be installed at night or off-peak traffic hours.
- ii. Load reduction through *equipment and appliance replacement* is a more capital intensive process, and should be implemented at the end of equipment life only after less disruptive measures have been taken. This one-to-one replacement is conceptually easy and, if executed properly, requires minimal operations disruption or employee training.
- iii. The final means of reducing off-site energy consumption is through the use of *on-site generation*, for which technologies such as rooftop photovoltaics have been proposed. This is outside the core competencies of the franchise. While this infrastructure is very visible, for the purposes of large-scale installation feasibility, capital constraints, and franchisee resistance lag, these upgrades will not be for Good Burger★ designation at this time.

The cost of improvements required to reduce average store consumption varies based on climate zone, and therefore the mix of technologies and prioritized improvements will change depending upon the geographic location of the unit. From a regulatory perspective, some regions enforce comparative requirements for heating and air conditioning based on climate, creating positive or negative regional incentives for savings which exist at the state and local levels. Just as one would consider climate zones, the working dimensional assumptions for the internal components of each location must be considered through aspects such as floor space, volume, bathrooms, exits, and similar metrics. A further consideration is the variety of technologies already present in Good Burger franchises, as this will vary depending upon the climate zone and amount of traffic the specific store receives.

In addition to improved LED or high-efficiency fluorescent lighting, the use of occupancy sensors has also been shown to provide a cost-effective means of reducing energy consumption. Occupancy sensors are relatively cheap, ranging from \$50-\$200 with an estimated payback period of 0.5-5 years (The Carbon Trust). Addressing lighting and HVAC initially due to the short payback period and long-term savings is not a new concept, and therefore many locations may have already made investments in these improved technologies. This is particularly relevant in non-seasonal temperature zones, where extreme temperatures may have prompted improve insulation long ago. Once this “low hanging fruit” of energy consumption has been exhausted, sensors provide a low-cost means of further reducing inefficiency in lighting, HVAC, and kitchen equipment (Galbraith 2009). This is particularly relevant in the drive-through areas in some climate zones, as it is difficult to implement conservation measures or otherwise innovate at the window for Good Burger★ locations. A complement in this strategy has been to add menu items which may help attract customers who do not dine-in.

Energy consumption attributable to lighting (20%) and HVAC (20%-30%) account for a large percentage of total restaurant use, and are unlikely to cause disruptions to business operations. Assuming an average across climate zones, the average store can reduce energy consumption considerably by investing in improved HVAC systems. Some ventilation savings may be realizable with ENERGY STAR fans. The introduction of demand-based exhaust controls allow sensors to reduce ventilation costs by 30%-50%. Depending upon the climate zone, cooling



and heating are likely to vary widely, rendering improvements in AC and heat exchangers either economical or entirely moot.

The most energy intensive components of Good Burger locations is the kitchen equipment, accounting for 40%-50% of total energy consumption, handily surpassing refrigeration consumption at 10%. That being said, appliances and large refrigerators are orders of magnitude more expensive than lighting and HVAC improvements. A full update of kitchen equipment would cost approximately \$4,130-\$16,448, an average of \$10,289. Furthermore, the cost of installing these large pieces of equipment is considerable, not to mention lost productivity due to disrupted operations. Refrigeration upgrades such as ultra-efficient cooling appliances, EMC motors for walk-in cooler/freezer, insulation, and installations intended to capitalize on waste heat recovery from refrigerant to preheat hot water should be considered as a second line of upgrades once envelope improvements have been completed.

Many QSR franchises have installed solar panels or wind turbines at a small number of locations. This is not a scalable solution and cannot be applied to a large amount of franchisees in the near-term. The only advisable application at present is to use these energy sources at high traffic, company-owned pilot locations to demonstrate the low overall contribution of these technologies relative to lighting/HVAC and appliances, as well as to promote the company's recent energy-conscious efforts as part of the Good Burger★ campaign.

Verification and Continued Learning: Piloting Best Practices

Savings and best practices related to ECMs should not be largely confined to the Good Burger Leadership Council if the corporate office hopes to rapidly accelerate adoption across restaurant locations. The data from corporate stores already implementing ECMs and tracking towards 10% energy reduction by 2020 can be used as a bedrock data set when the program is first proposed to franchisees, demonstrating actual performance and savings trends. The corporate office is also able to provide continued learning to franchisees by demonstrating to pilot stores best practices for easily exceeding the energy reduction target, as well as other aspects of operating a unit apart from cost savings. Simulations are largely viewed as idealized hypothetical scenarios, and therefore pilot programs are essential to convincing franchisees and the public that the company is actively moving towards energy cost savings and efficiency.

The internal website at Good Burger has been ineffective, and we recommend that any internal source such as this should now be used as a resource for tracking performance across the different pilot locations, and adding select performance data from franchisee locations. Franchisees performing above average may wish to disclose information, while others may not due to underperformance or general privacy concerns. If the corporate office decides to include franchise information, they will need to be sure this is both consistent with the terms of the franchise license and acceptable to the majority of franchisees.

Subway has initiated a related pilot project as part of their ECO-Restaurants initiative, which consists of a standardized 18-point minimum level of environmentally conscious measures in energy, water, waste, and packaging. Instead of the pilot locations being owned by the company, all of the "proofer" units are owned and operated by franchisees. The program is voluntary, and franchisees may take additional measures beyond these such as the LEED-certifications pursued



by 3 of the participating locations.

The ECO-Restaurant initiative does not include any sales-related incentives, with no efforts targeting improved customer dining experience. Furthermore, the branding of ECO-Restaurants is identical to that of conventional Subway locations. From an ECM perspective, the value offering of this particular program to most franchisees is tantamount to the savings they have already deemed as negligible and refused to adopt. Even if a comprehensive list of performance metrics and full financial data was found to exceed initial expectations and was to be shared with other owners, franchisees would be unlikely to flock to the program due to a perceived shortcoming in value. To date, only 13 Subway franchisees in the United States and 1 in France have converted their locations to ECO-Restaurants.

As Good Burger upgrades company-owned locations to meet the target reduction, it is important to consider installing a variety of upgrade options so that franchisees may more fully grasp the performance metrics produced by various combinations of materials and equipment. By providing a range of options, franchisees are more likely to select one. This contrasts sharply with scenarios in which consumers have a limited number of options, as the option to select none of them seems far more viable. The visibility aspects of the pilot and website also indirectly enforce a herd mentality, in which franchisees see others adopting measures and reverse entrenched perceptions based on the observation of others' behavior. Programs which are known to have poor adoption elicit similar thoughts that there must be something disadvantageous about the program.

Implementation: Franchise Adoption

The Good Burger corporate office should begin by conveying to franchisees that a new initiative has been proposed which essentially seeks to grow revenue through improved customer experience and creative marketing, while simultaneously increasing profit margins at each restaurant location. It should be made clear that this strategy aligns incentives by targeting sales increases and rewarding those stores which have or wish to make savings improvements with the company's ability to promote their top stores and lower the initial cost of more efficient appliances and equipment. We believe reducing any complexities associated with the initiative to this forthright and simplified explanation will resonate with franchisees, and will be clear enough to be agreeable even to those who do not elect to participate initially.

We do not recommend expending further resources in attempts to educate or convince the franchisees of the benefits of reducing energy consumption without hard data from actual resulting profit increases. Similarly, imposing additional involuntary requirements upon franchisees will inevitably cause the franchisee to feel as if their independence is limited, presenting an opportunity for conflict. The franchisor can instead provide more assistance in sales-driving methods, more guidance for best practices, and the carrot of improved profit margins as well as more effective marketing whether or not the franchisee would otherwise buy into a "green" strategy.

Franchisees have not responded to energy cost-savings alone, given that they represent an infinitesimal percentage of the operating budget per store. Tradeoffs in the form of capital expenditures, revenue losses due to installation, and potentially retraining employees are not worth the savings franchisees perceive they will enjoy. Franchisees are even less likely to make



large capital investments and re-train employees if new equipment is required as part of an unproven corporate initiative. Depending upon the geographic region, some restaurants may already have many of these amenities, we just want to establish a minimum. In cases for which the restaurant does have these amenities already, we are simply recognizing and rewarding them. We assume that all franchisees wish to increase long-term profitability, and will gladly incur these costs in order to obtain Good Burger★ certification.

It is possible that at a later stage, the corporate office may even issue a bonus to locations which can outperform the pilot locations when adjusted for climate region. However, we do not see such a competition as necessary at present. This may be more appropriate at a later stage when known and available energy savings have been maximized. An additional consideration is the fact that such innovations would be more difficult to scale and more costly if the materials required for the proposal was in any way customized, as this would eliminate the benefit of wholesale purchasing discounts from manufacturers already producing at a large volume.

The quick service dining industry experiences relatively high owner turnover, resulting in a further disincentive to make capital improvements (Franchise Times). Franchise agreements range in duration, but many are for a 20 year term and most contain renewal or update increments within this period. Throughout the industry, those managing several locations have historically remained a franchisee for a longer period, and have exhibited a greater willingness to make capital improvements. The average Good Burger franchisee manages 6 different locations, yet no such trend in capital investments has been observed. We surmise that a corporate-level initiative incentivizing franchisees with cost-savings alone is unlikely to be effective.

We believe that the most effective incentive avenues at this time involve correlating top-line growth with participation in energy efficiency programs. Energy expenses alone constitute only 3%-4% of total operating expenses at restaurant locations, and therefore provide little incentive for operational owners to reduce energy consumption beyond the natural efficiency evolutions inherent in technological advancement. However, franchisees are highly sensitive to methods which may increase sales. The corporate strategy should include the potential for increased same-location traffic and average receipt in order to provide not just savings from costs, but gains from sales. If credible results indicated that an improvement associated with the energy savings resulted in just a 1% increase in sales, then the capital investments would be justified.

Bundling efficiency improvements with sales-driving additions are the most direct means of franchisee adoption through corporate value-added incentives. This implies that something visible or subconscious must register with customers, and although these components may not directly contribute to energy efficiency, the branding and publicity of improved location features is entirely within the control of the franchisor.

There have been a number of studies suggesting that differences specific to one store section improves sales of the products in that section, independent of the product. This was demonstrated perhaps most famously in the Eco-Mart skylight studies conducted by Wal-Mart. Other studies have found similar results with temperature fluctuations (Rocky Mountain Institute). This principle applies equally to both customers, with respect to the direct utility derived from Good Burger★ location amenities as well as positive connotations of modern efficiency, and among franchisees, with respect to opting into the Good Burger★ program due to connotations with increased revenues rather than simply increased savings.



Our proposal includes both efficiency and customer experience improvements, followed by a national campaign promoting these changes to consumers. Initial pilots at select company-owned stores will provide a precedent for improved sales and cost savings. Locations will be evaluated by their compliance with these standards, and certified for branding as “premium” stores. Branding locations as Good Burger★ allows for immediate consumer recognition of WiFi access, expanded menu selection, and energy efficiency among other features. Network-wide qualification standards for locations meeting certain criteria provide a means of recognizing individual innovations while encouraging adoption of other improvements with marginally higher initial costs. Unlike LEED, we do not recommend tiers of certification. This erodes the incentive to convert, and would be disadvantageous for the purposes of rapid early stage adoption.

For high-value franchisee locations which do not choose to comply, the corporate office may offer to make capital investments for improvements, collecting the difference in savings and a percentage of increased sales in order to pay down the cost of improvements. Wholesale discounts of input purchase price allow the corporate office to control the magnitude of initial investment, and allow for purchase of surplus supplies at the optimal cost minimizing point to be installed at franchises which do not initially participate.

It is important to consider that some franchisees may have already made investments such that partial certification criteria is met. Determining why they chose to do so independently could be very informative. Furthermore, this performance data can be used to provide valuable information to the corporate office, and compared with pilot programs at company owned restaurant locations. Depending upon the terms of existing franchise agreements, the ensuing marketing campaign may necessitate exclusion from the regularly scheduled advertising fees paid by all franchisees, and should observe specific language in order to avoid violating any pre-existing obligation for mutual promotion.

There is likely to be different rates of adoption depending on the geographic area. This is due to both perceptions of franchisees, local cost of energy, and regional-specific tax or other financial incentives to reduce consumption. Due to the fact that the program will not receive full buy-in from franchisees, efforts should concentrate on high-visibility areas, franchisees with multiple locations, and those with exorbitant energy consumption in order to ensure a low average across all franchise locations. Franchisees managing a high number of locations should be paid particular attention due to the fact that adoption at one location to certification levels implies a high likelihood of seeking certification for all of their stores should the advertised benefits come to fruition.

Despite the sincerest efforts of the franchisor, it is unlikely that a majority of franchisees will participate in the program initially. Direct penalties are unlikely to be an effective means of incentivizing franchisees and may strain relations. We wish to incentivize voluntary participation in lieu of a penalty system, the latter of which could cause a schism between the corporate level and franchisees. There will instead have to be positive reinforcement and high internal publicity of improved profitability resulting from adopting energy-efficiency. Schemes such as discounts and preferential benefits are effectively the same as penalties, without alienating non-participating franchisees.



Proposals of encouraging adoption across franchises often suggest decreasing royalty fees in certain years to allow the franchisees to make capital improvements. This may be somewhat unnecessary given the present circumstances and under 5 year payback period. However, this is an option which may be considered should expected rates of adoption fall short and may be a viable strategy for QSR franchise chains in a slightly different position than Good Burger. Voluntary programs are all but essential, as the existing Good Burger lease structure does not permit the corporate office to rescind the license of the franchisee on the basis of energy consumption, and therefore leverage from a credible threat perspective is weak. The Good Burger★ program is technically a certification, but is effectively a renegotiated lease for all intents and purposes. For this reason, Good Burger must offer an enticing proposition for franchisees to make the further commitments outlined by the new program.

Positive incentives are preferable to negative incentives not only with current franchisees, but in setting precedents of corporate behavior to future prospective owners. Words like “program retention” and “social accountability” are more positive than “enforcement” and “compliance”. This type of language is important in preventing franchisees from perceiving the initiative is a hindrance, and rather making a long-term financial investment while doing something responsible. Hard line upgrade ultimatums, excessive monitoring or audits, and penalty fees will likely discourage others from wishing to open up new branches of Good Burger unless these changes are voluntarily agreed to by franchisees. We do not believe that there will be a noteworthy number of cases in which franchisees adopt energy efficient equipment in order to gain certification, and then revert to less efficient equipment later, though it is worth including a clause to this effect in the initial certification contract.

Thinking ahead, it is important to consider future challenges surrounding the persistent issue of next generation technological efficiency and avoid remaining confined to the 2020 target. Given that Good Burger★ locations are being branded as the flagship premium locations for Good Burger, it is prudent to anticipate the barriers to adopting the latest efficiency measures in 2040 once the materials available now become inefficient and obsolete by comparison. One proposal is to include terms stating that a franchisee violates the license by falling beneath a certain benchmark, such as 2 standard deviations from the mean energy efficacy of all other regional locations. This may also serve to incentivize franchisees to innovate along the way, attracting more like-minded franchisees and improving long-term royalty revenue streams to the corporate office, as well as avoiding later costs incurred by having to allocate time addressing locations which have fallen behind. The Good Burger Leadership Council can determine whether they wish to include rolling mandatory upgrades as part of the boiler plate terms for Good Burger★ certification agreements.

Financing: Enabling Scalability

The major contingency in financing solutions is the availability of financing and the cost of capital to the corporate arm. We have identified the three primary drivers of adoption to be financing, recognition, and ease. In the case of ECMs in commercial buildings, this translates to financing, green endorsement or efficiency certification, and prioritizing major energy sinks. The functional components of the Good Burger★ program seeks to capitalize on the latter two priorities for all parties and financing for franchisees, leaving the only remaining issue of corporate financing. Given that the initiative first targets high energy sinks, we calculate a



conservative payback period of less than 3 years based on data provided by the Pacific Northwest National Laboratory. Assuming a discount rate consistent with many short-term subsidized loans for efficiency improvements, this implies an IRR of approximately 25%.

The corporate office is advised to secure a minimum percentage of participation in the launch of the Good Burger★ program for several reasons. Without a minimum level of participation, the Good Burger★ branding may reach consumers through advertising media, but cannot be capitalized upon without consumers having the benefit of experience at these locations. Minimum participation will also ensure that the expenditures for advertising and branding efforts are not being incurred for the benefit of a handful of locations.

We anticipate that the Good Burger★ initiative will cost the corporate office at least half of what is usually paid in advertising for the first year. QSR franchises often allocate approximately 4% of franchise fees to ongoing marketing and promotional activities. For a franchise with 8,000 locations recording 8% in royalties, this amounts to approximately \$9.6m. The degree to which the corporate office assists with offering components of the Good Burger★ initiative at little or no cost will likely vary depending upon the restaurant. We estimate that for the breakeven number of initial participants, the cost of the initiative will be under \$30m to modify interior building design, WiFi, and add premium menu items to the store offering.

In such an instance for which many stores do not voluntarily participate initially, the corporate office could consider making this investment themselves, provided that adequate funds can be allocated. A similar strategy has already been proposed for those who do not initially participate, and this is a natural extension. An alternative strategy is to reduce the royalty payments for one year to 4%, allowing the franchise to purchase the ~\$20,000 in equipment upgrades, and record an additional \$10,000 in revenues. Particularly generous arrangements from the corporate office might propose a sliding scale thereafter, such as a 1% increase for the three years following improvements. We do not believe this will be necessary at this time.

Conclusions

This proposal effectively leverages the existing strength of the corporate office and innovates within these confines without the need for extensive reliance upon third party input. Enrollment in the Good Burger★ program stands for a host of benefits to the franchisee. They do get the savings naturally inherent in better technology, but the corporate office also provides recognition in three ways:

- i. Additional national advertisements specifically promoting Good Burger★ locations.
- ii. Mobile applications and web maps that allow users to see where Good Burger★ locations are, with Good Burger★ locations uniquely identified.
- iii. Distinctive logo is visible from the road so as to entice passing potential customers.

The present management of most major QSR franchises is amply capable of implementing any number of variations of this broadly applicable solution. A nationwide location overhaul is not required to exceed energy efficiency targets, and proves to be unrealistic when considering capital constraints and franchisee adoption. Linking sales to energy efficiency is crucial.



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