

# Akureyri on the Verge: Carbon Neutral and Beyond Through Targeted Social Marketing

# 21

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## Chapter Overview

Akureyri, Iceland, possesses a lot of natural advantages when seeking carbon neutrality. Even so, at a time when many municipalities, regions, or even states and nations are looking at becoming carbon neutral by the middle of the century, at best, Akureyri is already on the verge. And this is not easy. Carbon neutrality is achieved when carbon emissions (usually energy generation) are matched or exceeded by carbon removal (e.g., sequestration, planting trees). Looking more closely at this exemplar city allows us to study a question that will face every sustainability campaign at some point, how does the community go the last mile? What happens after mass campaigns are generally successful? Success will create an environment calling for different approaches, and the experiences of those first crossing this threshold can be instructive for others. More specific to social marketing, what happens when you move from a successful mass market approach to one more targeted at remaining micro-segments or even individual entities needing tailored solutions?

## SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats)

### Strengths

Akureyri is relatively small (19,000) but is the largest city in Iceland outside of the Reykjavik area.

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The “capital of the north” is a major regional economic, political, and educational center, relatively cosmopolitan and with important industries such as fishing, tourism, and consumables (meat, beer, coffee).

Even so, Akureyri is still small enough to maintain a sense of community. Personal relationships abound among key decision makers.

The city has been receptive to previous sustainability initiatives including recycling stations and curbside pickup of household compost.

Awareness and understanding of sustainability issues are high.

A number of prominent non-governmental organizations are key players in the commercial and sustainability communities.

## Weaknesses

The remaining sustainability issues are in key industries that drive the local and regional economy. Costs may be substantial and directly borne by a few firms or individuals though with a wider economic impact.

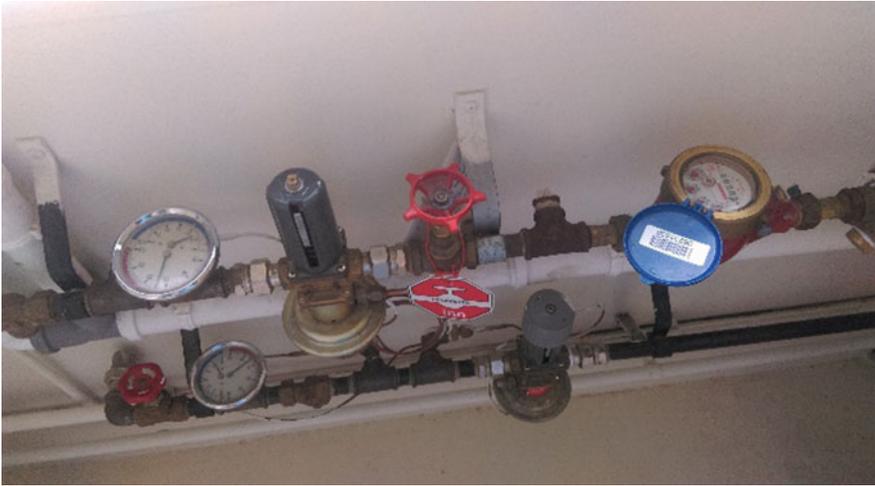
There is a lack of infrastructure for transportation initiatives, especially electric recharging facilities (Fig. 21.1).

## Opportunities

Iceland has tremendous clean energy capabilities in geothermal (electricity, heating) and hydropower (electricity). Electricity needs (100%) and hot water and heat (87%) are provided by these sources (exceptions are often on outlying islands off the main grid) (Fig. 21.2).



**Fig. 21.1** Recharging spots at Akureyri University



**Fig. 21.2** Household geothermal hot water/heating system

Although numerous political parties exist and have a presence in government, they are not traditional right/left parties as we see in the USA and similar countries. There is political cohesiveness around the topic of sustainability, present across the political spectrum.

Individuals are very knowledgeable about climate change issues and very thoughtful about their personal choices. In considering electric cars, for example, many also consider the environmental costs of building the new car and disposing of a perfectly workable old car. This attitude is in line with a sense of anti-consumerism, also quite apparent.

## Threats

As a small, isolated island, the economy is susceptible to shocks. During the US/EU financial crisis of 2008, for example, the entire economy declined sharply and took years to recover. Some similar occurrence would likely delay any further sustainability actions requiring a substantial investment.

Geographic isolation also requires Iceland to import a lot of goods since either the climate would not support their production (agriculture) or the market is too small to justify domestic manufacturing. Imported goods are expensive and generally require less-sustainable transportation options.

Disposing of waste is also an issue.

## Segmentation and Targeting

One of the key tools in the social marketer's playbook is effective segmentation and targeting. Along with the marketing mix, segmentation is the area in which a good decision can be critical to the success of the campaign (Kotler & Zaltman, 1971; Lee & Kotler, 2015). Conceptually, we know that segmentation can help with understanding the needs and wants of segment members, allowing us to target those most receptive to an offering. Moreover, the marketing mix of offerings can then be adapted to each segment, allowing customized products, distribution, pricing, and communications. In the case of social marketing, better understanding the perceived benefits, costs, and barriers of a segment allows construction of an exchange coaxing behavior change out of the targets.

Describing target segments in Akureyri can be done most effectively by referring to the *Six Americas* studies on climate change attitudes in the USA. *Six Americas* is based on research from the Yale Project on Climate Change Communication and George Mason University, repeated on an annual basis over most of the last decade (Maibach, Roser-Renouf, & Leiserowitz, 2009; Roser-Renouf, Maibach, Leiserowitz, & Rosenthal, 2016). Based on self-reported attitudes and behaviors (or intended behaviors), US respondents are segmented into six categories, with associated population percentages:

- Alarmed (17%): high interest, high belief, takes individual action
- Concerned (28%): pays attention, probable belief, convenient actions
- Cautious (27%): notices discussion, notices evidence, not ready for action
- Disengaged (7%): little interest, low belief, too busy otherwise to take action
- Doubtful (11%): little interest, uncertainty, unwilling to take action
- Dismissive (10%): interest, disbelief, individual action in other direction.

Although this segmentation scheme recognizes dramatic differences in the US population, including that climate change as a political concern drops off sharply once we move beyond the "Alarmed" segment, very few sustainability initiatives actually address the differences. Even when social marketing is employed, it often treats the entire population similarly and discussions about sustainability often focus only on the two extreme segments—the true believers and the climate change deniers—with no middle ground. In fact, the vast majority of the public lies in the middle.

Conducting effective segmentation and actually adjusting the social marketing exchange, as appropriate, for different targets can be a key to a successful campaign. Segments can differ by the attitudes and behaviors, perceived barriers or costs, desired benefits, responsiveness to different parts of the marketing mix, and other aspects. Continued success in reducing smoking rates, for example, can be traced to identifying and addressing the how the youth market, in particular, differs from other segments. When rebellion against authority is a major benefit to smoking, stop smoking messages from authority figures lose their power and can

actually be counterproductive (Hicks, 2001). Even more recent efforts, such as identifying micro-segments of smokers referred to as “hipsters” show the power of effective segmentation by creating social marketing exchanges aimed at the hardest of the hard-core smoking segments (Ling et al., 2014).

Similarly, Rare Pride has made a name for itself in social marketing circles through its habitat preservation interventions around the world. Although the template remains similar (branding by iconic species, local leadership, person-to-person communications), the social marketing initiatives work because they are adapted to each location, essentially a customized solution to the special circumstances of the community (Boss, 2008).

Akureyri not only does not have the full range of climate change attitudes seen in the USA, but the three that are apparent are clustered at the alarmed/concerned end of the spectrum. The respondents classified themselves as belonging to one of those segments or pointedly asked to be put somewhere in between (not alarmed but more than concerned). This added segment does believe in global warming and takes some individual actions but is not “panicked.” Even with a more truncated range of segments, differences in belief were apparent, such as whether warmer temperatures were necessarily a bad thing for Iceland (especially among farmers), whether to buy an electric car (when also adding in recognizable manufacturing costs and disposal costs of quite adequate existing cars), whether capital expenditures in businesses still dependent on carbon-based fuels were justified, and so forth. Discussions with Akureyri residents revealed a deep, sophisticated knowledge and understanding of the issues, both pro-sustainability and con-sustainability that was much more nuanced than what is generally seen in the USA. The segments, based on depth interviews with over 50 key respondents, can be described as:

*Alarmed*, strong concern about climate change even if it might not affect them directly (e.g., dislocation or even war in other parts of the world). Already taking personal actions beyond the community expectation such as biking to work, electric vehicle, reduced consumption and etc.

*Alarmed/concerned*, also strong concern about climate change but less immediate. Intentions to take personal action such as electric vehicle but waiting for barriers such as few charging stations to be reduced.

*Concerned*, understand issues and believe action should be taken, just not yet. Often more considerable barriers exist, related to commercial interests (replacing a fleet of boats or cars, turning over part of a farm to reforestation).

Other segments, identifiable in the USA, were not apparent in Akureyri: Cautious, Disengaged, Doubtful, or Dismissive. There were rumors of a few old farmers who may fit one of these designations, but none were encountered during interviews.

Much of the successful work to date on carbon neutrality has targeted the entire municipality on a mass market basis. This has worked, but community leaders clearly do understand that differences exist in those they target for further behavior change. In moving from the mass market to more personalized, even one-to-one efforts, understanding the existing segments will become more important.

Objectives, benefits/barriers in an exchange context, and the marketing mix to address the exchange do differ between segments, micro-segments, and even individuals. More customized marketing is dependent on fully understanding the targets and their differences.

One key aspect to note is more precise differences between the reconfigured segments. The alarmed segment, in particular, is identified by its actions, so a word about consumer response is probably in order. A general marketing framework for obtaining positive target behavior is the consumer response hierarchy: cognitive, affective, and behavioral responses. Lavidge and Steiner (1961) originally proposed this hierarchy of effects model, progressively moving from awareness through knowledge, liking, preference, conviction, and finally purchase. Cognitive, affective, and behavioral (conative) is simply the shorter version of the same process. From a marketing standpoint, we want to interact with the consumer, usually through communications, to move through the stages. So advertising might create awareness, while brand activation achieves stronger affect, moving an individual from liking to preference. More specifically, individuals pass from unaware to aware and knowledgeable (cognitive response), on to increasing degrees of feeling toward a brand including preference (affective), finally engendering enough motivation to drive purchase (behavior). The alarmed segment is motivated enough to act. The concerned/alarmed and concerned segments have awareness/knowledge and some degree of motivation but not yet enough to obtain action. Any reconfiguration of the social marketing exchange must increase motivation enough to drive behavior, moving the target to take that final step on the hierarchy.

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## Campaign Objectives

Many of the initiatives in Akureyri are driven by the local utility, Nordurorka (electric, hot water, cold water, sewage) and affiliated units Vistorka (alternative energy), Orkusetur (energy efficiency), and Eimur (energy innovation), though the municipal government also plays a key role as do some other entities. Current projects include (Sigurdarson, 2016):

- Recycling (mostly at the source but converting to curbside pickup)
- Composting (curbside pickup)
- Free local bus service
- Walking and bike paths
- Reforestation (a national program but pursued aggressively around Akureyri)
- Methane capture from the local landfill, processing, and refilling stations (biogas)
- Biodiesel from cooking oil recapture, processing, and use (mainly on city buses)
- Agricultural plastic recycling
- Electric vehicle recharging stations (Fig. 21.3).

As noted earlier, the original objective was carbon neutrality, so reducing carbon-producing activities while increasing carbon neutral or carbon reduction ones. As also noted, this has generally been achieved, with results tracked as shown



**Fig. 21.3** Nordurorka headquarters; Akureyri (with charging station and trees)



**Fig. 21.4** Tracking key performance indicators (Orkusetur.is)

on the Orkasetur Web site. These include energy use by source, new vehicle purchases by type, and fleet makeup (Fig. 21.4).

Post-neutrality, the general initiative changes but objectives become more specific. Akureyri calls its plan for moving forward “carbon integrity,” continuing to make further progress beyond carbon neutrality. Further improvements call for more person-by-person successes as those aware but not yet fully motivated to act (the alarmed/concerned and, especially, the concerned segments) are convinced by a more attractive proposition. Consequently, and as is somewhat illustrated by the Orkasetur tracking, each additional non-carbon vehicle purchased, each farmer agreeing to plant trees, and each business making a change in assets or procedures

is its own initiative and success. That moves beyond the mass market to a more individualized approach and calls for different marketing tools.

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## **Barriers, Benefits, and Competition**

With the alarmed segment, a motivated and action-oriented group already exists. The onus is on community leaders to remove barriers (e.g., few recharging stations locally or on the ring road around the country), and then, action will happen. Segment members are already convinced of the benefits of behavior change and have no attachment to competitive behaviors. Remaining barriers will be removed, and it is only a matter of time.

With the alarmed/concerned group, the personal intentions are similar but even less immediate. So, while an intention may exist to buy an electric or methane vehicle, the individuals already own a perfectly good car and a strong anti-consumption attitude drives many not to discard usable items in favor of something new, at least not until necessary. But when the new behavior makes sense (car purchase, participating in curbside recycling), this segment will also willingly discard competitive behaviors as they are also already convinced of the benefits of change. Removing remaining barriers, finding ways to enhance benefits, and adopting more persuasive ways to communicate the attractive exchange should again gain change on a case-by-case basis.

Those in the concerned group are tougher. Though convinced climate change is real and expressing some concerns about it, they are less convinced of the need for immediate personal action. As a number of individuals in this group also have commercial interests, the benefits/barriers assessment is also somewhat different. Similar personal benefits accrue from participating in behaviors aimed at slowing climate change, but this segment has higher barriers, including the cost of retrofitting fishing boats with new engines, replacing a fleet of rental cars, committing scarce farmland to reforestation, or paying grocery employees to unwrap food for composting. The current competitive behavior (not invest in new capital assets, use labor for sustainable activities) would be seen as more attractive than is the case in other segments, even if each individual understands that the changes will need to be made eventually. The more the barriers can be removed and benefits realized closer to the present time, and the more that persuasive techniques can again be employed, the more quickly these sometime more impactful case-by-case changes will happen.

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## **Positioning/Research**

Consequently, we can capture the positioning approach similarly for each segment: Move more quickly. The details vary by segment as the alarmed and alarmed/concerned segments are waiting for barrier removal, while the concerned

will need more convincing on the benefits (or that barriers/costs are not as high as perceived). But the message from community leaders is that sooner is better. The community is convinced, so let us get this done sooner rather than later.

As the effort moves to a more personalized approach, the individual relationships between community members become a key. Broad-based research efforts, much like mass marketing, would not be effective. Much like the Rare Pride case cited earlier, each intervention depends on the knowledge of a local community leader and team, customized solutions, and a more grassroots level marketing approach. Extensive interviews supporting this case analysis established not only the range of climate change attitudes but also identified the structure of the social network/relationships behind sustainability activities. Personal knowledge of the targets, personal relationships, and customized approaches characterize the carbon integrity emphasis.

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## Marketing Mix

### Product/Offering

As noted earlier in this case, much of the hard work to get to carbon neutrality has already been accomplished. Offerings providing non-carbon energy alternatives nationwide were developed in the 1970s (and are tailor-made for an electric car infrastructure as electricity is cheap), and more recent initiatives such as recycling and composting have also been largely adopted by the entire community (Fig. 21.5). Consequently, this discussion focuses on the more recent challenges and responses, taking the last steps to carbon neutrality and going beyond, to “carbon integrity.”

A further discussion of the concept of exchange can help in understanding how the offering can be adjusted to better appeal to the target. Rothschild (1999) stressed the importance of understanding the exchange from the target’s perspective, to see what they perceive as the barriers/costs of changing behavior as they evaluate whether the potentially accrued benefits are worth it. He also noted how benefits and costs in standard marketing are often a good/service exchanged for a monetary price. But in social marketing, the broader range of benefits (psychological, social) and costs (time, entrenched behaviors, entrenched attitudes) are potentially just as powerful options for encouraging change. His example of a drunk driving prevention program, where individuals knew their behavior was wrong but continued to do it because of inconveniences such as not having their car for work the next day (if left at the bar) or because perceived punishments were seen as unlikely, highlighted both the insights to be drawn and how creative solutions can effectively alter the benefit/cost evaluation (Rothschild, Masten, & Miller, 2006). In this case, it was a low-cost limo/taxi service.

The product/offering part of the social marketing plan is all about creating something delivering more benefits or removing more barriers than the status quo.



Fig. 21.5 Household compost/trash bin

One potentially effective aspect to add to the exchange is social acceptance/rejection, captured by the concept of social norming.

Social norming (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007) has to do with expected attitudes and behaviors within a group. Pressure exists for members of the group to conform to those expectations with associated rewards (social acceptance) or costs (social rejection). It can be quite effective in social marketing, and important studies in the field have linked social expectations with increasing recycling or decreasing dangerous health behaviors (smoking, drug usage, unsafe sex). If the community is together and individuals behave outside of expected norms, the pressure to conform can be considerable. So, an added benefit to the exchange is social acceptance of the new behavior, and the individual now feels more a part of the community.

During the Fulbright—NSF Arctic research project conducted in Akureyri, social networks were explored, asking respondents for personal contacts who influenced their attitudes toward climate change. At the heart of such research is social network analysis (SNA), assessing the number and strength of connections between social network participants (Scott, 2017). One of the key objectives of SNA is identifying key influencers in the networks (centroids) and those who provide a connection across different parts of the networks (border spanners). With such information in hand, social maps can be constructed, determining the important connections within subnetworks, how subnetworks (segments) intersect, if at all, and what key individuals employed to influence others in the network. In the case of SNA for knowledge exchange (Liebowitz, 2005), the method is used to identify from whom individuals obtain knowledge. We can use the technique, as he did, to identify the key sources of information or knowledge (here, on climate change), and how they diffuse through the social network. With that understanding,

key relationships can be identified and employed to improve community knowledge and establish social norms. In Akureyri, the network is cohesive; there are some slight but noticeable distinctions between the government, academic, and commercial networks; and the centroids and boundary spanners are readily apparent.

What is interesting, however, is that the centroids and border spanners are actually the same individuals and revolve around Nordurorka (the regional utility). Such non-governmental (NGO) agencies play a particularly important role in the social network surrounding sustainability efforts in Akureyri. At the center, with the most connections are several executives from the Nordurorka group and spouses in a prominent role at the university and heading the local consumer affairs agency. During the interviews, numerous parties pointed toward them as key leaders. They were also the links to the commercial entities. What that adds up to is a cohesive social network with a narrow range of climate change attitudes. Slight differences exist in perceptions of acceptable behaviors to address climate change (though, as noted earlier, those differences are more about readiness for action). So social norming has the potential to be a very powerful driver of continued changes in behavior, especially when the social pressure is applied by personal acquaintances known to be highly respected in the community.

Relating the social network/norming back to the targeted segments, the presence of cohesive social pressure to change behavior will enhance the appeals to the alarmed and alarmed/concerned segments. But the real impact is seen in the concerned segment, especially with the commercial interests. It is very clear to individuals in this segment what the community attitude is toward conforming behaviors, especially when personally delivered by highly respected individuals within the social network (who lead sizable organizations themselves). Moreover, the personalization of the appeals allows the exchange to be tailored to the individual. The customized benefits, barriers, and competitive behaviors that frame the proposed exchange have the potential to better drive behavior change. Moreover, community leaders have given themselves options.

The area of transportation, for example, is still dependent on carbon-based fuels, in general. Though intentions are good (almost 100% of respondents said their next personal car would be electric), electric cars are still rare. The fishing fleet uses considerable carbon-based fuel as do the tourism providers (rental cars, tour companies, whale watching). But as changeovers are made, there are options, including not just electric but methane/biogas and biodiesel (at present, there may actually be more methane stations available and Orkusetur claims it to be better performing and less costly) (Fig. 21.6). So as the fishing fleet considers new ships, the rental car agency new cars, or even individual consumers look at changing vehicles, there are options as to which best fits their needs and budget. Options may also confer different, additional benefits such as enabling waste disposal (methane/biogas and biodiesel). These are the sorts of customizable details best explored through one-on-one conversations.

Similarly, community leaders can consider the target and not just offer multiple options but use their expertise to craft an offering specifically for that individual's circumstances. We already discussed how the exchange will be different for a fishing



**Fig. 21.6** Methane/biogas refilling station



**Fig. 21.7** Farm with tree line beneath a steep slope

company as opposed to a car rental agency. But outside of transportation, solutions are even more varied. The farm agency (RML) and the forestry service (Sko-graektin), for example, work with individual farmers to identify specific parcels for carbon-friendly solutions such as planting trees. There is an obvious community benefit, but the benefit to the farmer is enhanced if a tree line can help provide mudslides down some of the steep slopes towering over many landholdings. The exact suggestion depends on the circumstances of that farm and what the experts can recommend in terms of the best possible solution for that installation (Fig. 21.7).

## Place/Distribution

For the alarmed and alarmed/concerned segments, Akureyri has been following the traditional social marketing playbook in getting to carbon neutral. Generally, behaviors have been made convenient. Compost is picked up curbside, and dedicated compost bagging and containers have been provided. The free local bus service has convenient stops and frequent runs. Walking paths are often more direct than driving.

In other circumstances, there is still more work to do but planners are moving in the direction of improved distribution. Most residents take recycling to centralized locations (usually the grocery stores where purchased). Curbside pickup of recycling bins has just been introduced, but residents must pay for the service. One would imagine that is likely to change. But the key for moving toward carbon integrity will be more convenient refill options for transportation, help with planting trees, and so forth, resulting in easy-to-adopt personalized solutions.

## Price

Some of the price aspect has already been considered in the barriers/competitive behaviors section. But the pure financial cost is a factor for all segments. While operating costs in transportation are clearly cheaper with electric or methane vehicles, boat engines, and such, there are capital costs in purchasing new vehicles. Similarly, farmers taking productive land offline lose whatever crops might have been grown there. And operating costs can be a factor, as in the case of composting at groceries and their required additional labor. A balance exists between costs, savings, and more intangible benefits, and the balance has clearly not swung far enough to the savings/benefits side, especially for the commercial interests in the concerned segment.

One clear advantage to a more customized, person-to-person approach to the concerned segment, however, is the ability to reframe the pricing issue. Choosing from multiple options can help if there are differences in the financial and social costs. But more interesting is the capability of being able to frame the discussion as shared sacrifice. As noted in the discussion concerning social networks and norms, there are key, identifiable individuals using personal relationships to drive behavior change. These and other community leaders have set up the organizations and the financing for several of the more innovative initiatives (biogas, biodiesel, agricultural plastic recycling), putting their personal funds, and those of numerous other social network members, at risk. The willingness to bear financial loss provides some moral authority in one-on-one discussions with others that may have some hesitation in making major investments in sustainable options.

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## Promotion/Integrated Marketing Communications

It is not unusual for social marketing initiatives to eschew expensive mass media communication techniques and instead pursue more low-cost guerilla or social media methods. Akureyri is no different, utilizing digital and local media as well as branding opportunities such as sides of busses, recharging/refilling stations, and other high-visibility locations.

But what is really innovative about this approach is its reliance on person-to-person communication, particularly for the more challenging concerned segment. In many ways, it is about personal selling, even though the participants probably would not call it that. Certain unique characteristics enable this approach. Targets are relatively few and individually identifiable. We know that one-to-one communications are highly persuasive and so could be particularly effective in moving the aware and partially motivated toward action. One-to-one is also more flexible, with options to discuss customized solutions. Person-to-person communication also reinforces the social network of the community and associated social norms. Explicit attention to personal selling as part of the marketing communications mix makes strategic sense in this case.

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## Program Evaluation

Campaign objectives continue to be monitored through Orkusetur, as detailed earlier. The move to carbon neutrality has been tracked and reported. Individual successes are celebrated as they occur. Every non-carbon car sold, every switch made by a commercial operation, and other moves toward carbon integrity can be recognized and counted individually.

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## Lessons Learned

The Akureyri case illustrates a unique situation, one in which a standard social marketing approach has been a great success, with carbon neutrality imminent. Much was due to special circumstances such as massive alternative fuel capacity built decades ago and a population already holding positive attitudes toward sustainability activities. But there was still work to be done, and community leaders provided the right mass market approaches to get the community this far.

Continuing further will take some changes. In the case of the alarmed and alarmed/concerned segments, the mass market approaches can continue, perhaps speeding up behavior change. Individuals are already committed, and much of the work will be removing barriers to change and reminding the community of the social norms of taking such actions.

The unique learning to pull from the Akureyri example, however, is the move to a more customized approach to the concerned segment. With a range of offerings to satisfy different circumstances, a powerful social network with clear social norms, influential self-sacrificing leadership, and a willingness to take the time to communicate person-to-person, the approach makes for a strategically solid approach to cleaning up remaining loose ends. Objectives and results can be evaluated on a one-on-one basis.

### Discussion Questions

1. The segments/social networks in Akureyri are not that dissimilar to one another. How might this type of approach need to change in an environment with markedly different segments? What do you think needs to be done in the USA, given the *Six Americas* results?
2. Why would a wider range of solutions be attractive as an offering? A particular target can only choose one, so why does diversity matter?
3. What other social marketing applications might be ripe for a social norming approach?
4. How would a sense of self-sacrifice enhance an individual's standing in a social network? How would it impact their standing and persuasiveness with others in the network?
5. Given what you know about different marketing communication approaches, why is one-to-one communication so effective in this kind of application?

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