



A Research Observatory for a Sustainable Future



## Newberry Geothermal Energy

Establishment of the Frontier Observatory for Research in Geothermal Energy (FORGE) at Newberry Volcano, Oregon



## Appendix G

### Communications and Outreach Plan

April 27, 2016



# Contents

Abbreviations and Acronyms .....	G.iii
G.1 Summary.....	G.1
G.2 Communications Goals.....	G.2
G.3 Outreach Plan .....	G.3
G.3.1 DOE and GTO .....	G.3
DOE Project Management.....	G.4
DOE Communications.....	G.4
G.3.2 Regulatory Agencies.....	G.6
G.3.3 Geothermal Scientists and Engineers.....	G.8
G.3.4 Industry .....	G.10
G.3.5 Local Communities and Governments.....	G.12
Local Governments.....	G.12
Local Residents and Visitors .....	G.14
G.3.6 Educational Institutions.....	G.15
K-12 Schools .....	G.15
Higher Education .....	G.17
G.3.7 Science-Attentive Public.....	G.18
G.3.8 Conflict Resolution .....	G.19
Crisis Communications.....	G.20
G.3.9 Materials.....	G.21
G.3.10 Timing.....	G.21

## Figures

G.1	The NEWGEN communications team will employ a variety of cross-channel outreach methods to influence key targets and achieve FORGE goals. ....	G.2
G.2	The outcome, frequency, and timing for each communication and outreach method used to provide DOE project management with timely updates and DOE communications materials for outreach efforts. ....	G.6
G.3	The outcome, frequency, and timing for each communication and outreach method used to provide Regulatory Agencies with reports and timely updates. ....	G.7
G.4	The outcome, frequency, and timing for each communication and outreach method used to provide the Geothermal Scientists and Engineers audience with information about how they can participate in FORGE and learn the results of FORGE research projects. ....	G.10
G.5	The outcome, frequency, and timing for each communication and outreach method used to provide the Geothermal Industry audience with information about how corporations can be involved with new, more efficient, and cost-effective EGS technologies. ....	G.11
G.6	The outcome, frequency, and timing for each communication and outreach method used to provide the Local Communities and Governments audience with information about why EGS technology is safe and the benefits of FORGE to the community. ....	G.13
G.7	The outcome, frequency, and timing for each communication and outreach method used to provide the Educational Institutions audience with the tools needed to educate students about EGS and encourage them to pursue a career in the EGS field. ....	G.16
G.8	The outcome, frequency, and timing for each communication and outreach method used to engage the science-attentive public audience and generate awareness and support of EGS. ....	G.19
G.9	The timeline for the entire NEWGEN C&O plan used to build awareness of FORGE at Newberry Volcano, increase public literacy of EGS, garner local support, and foster research to further EGS development. ....	G.22

## Abbreviations and Acronyms

BADGES	Building a Diverse Geothermal Energy Sector
BLM	Bureau of Land Management
C&O	communications and outreach
DOE	U.S. Department of Energy
DOGAMI	Department of Geology and Mineral Industries
EGS	enhanced geothermal system(s)
FORGE	Frontier Observatory for Research in Geothermal Energy
GE	General Electric
GTO	Geothermal Technologies Office
NEWGEN	Newberry Geothermal Energy
OSU	Oregon State University
PNNL	Pacific Northwest National Laboratory
RSS	Rich Site Summary (Feed)
STEM	Science, Technology, Engineering, and Mathematics
USFS	United States Forest Service

# Appendix G

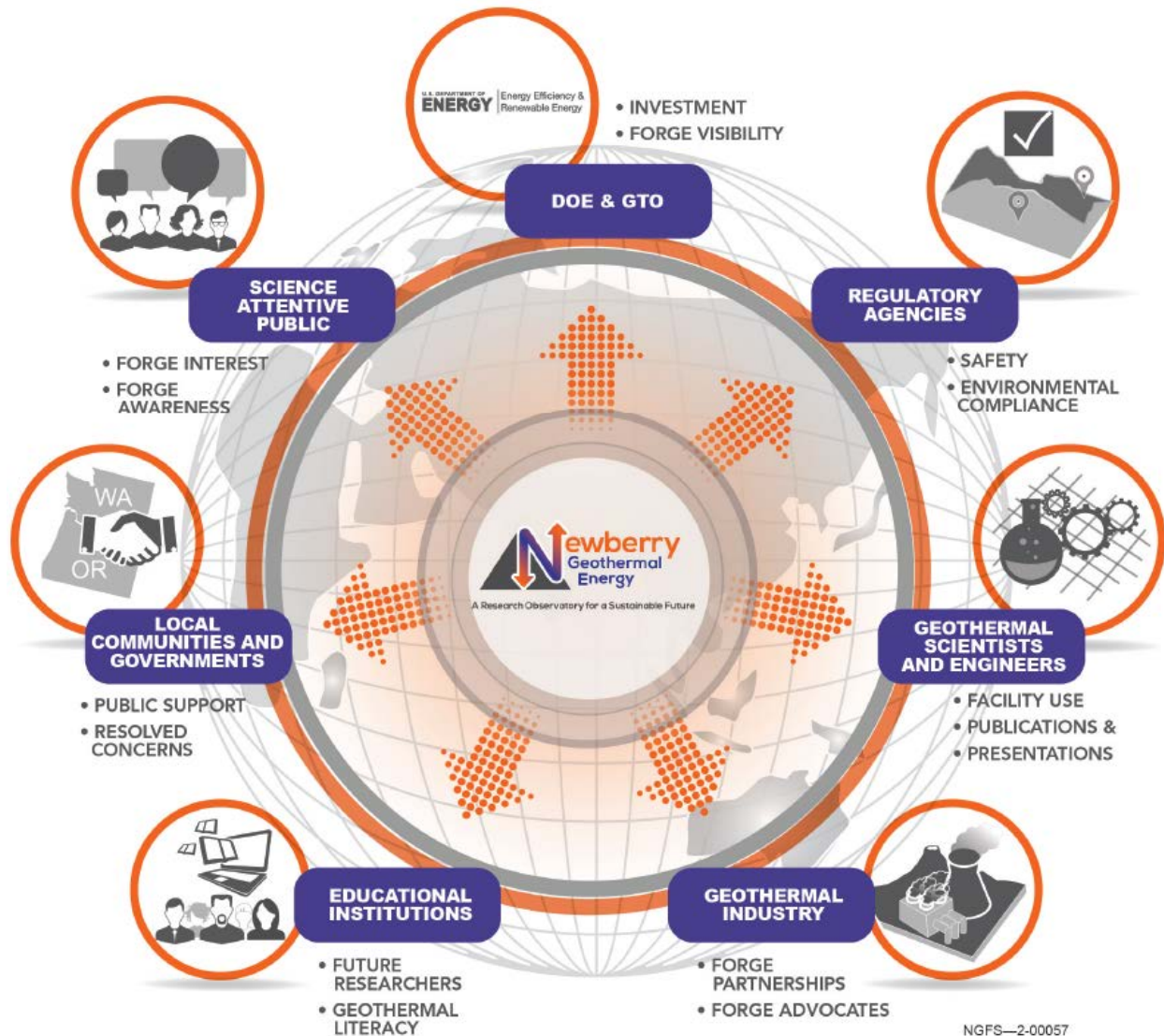
## Communications and Outreach Plan

### G.1 Summary

Newberry Geothermal Energy (NEWGEN) proposes a robust communications and outreach (C&O) plan to support the establishment and management of a dedicated enhanced geothermal systems (EGS) field laboratory at the Newberry Volcano Frontier Observatory for Research in Geothermal Energy (FORGE). Through this C&O plan, NEWGEN will drive active involvement in FORGE by the subsurface and geothermal communities to support the development, testing, and improvement of EGS technologies. By building awareness of the program through the C&O plan, NEWGEN will inspire a wide variety of scientists and engineers to propose innovative research at the FORGE facility to gain a fundamental understanding of the key mechanisms controlling EGS success at the NEWGEN FORGE site. Simultaneously, communications efforts will increase public literacy of EGS and meet U.S. Department of Energy (DOE) reporting requirements. NEWGEN will employ cross-channel outreach methods to inform stakeholders and key audiences, including subsurface and geothermal scientists and engineers, industry, local communities and governments, educational institutions, and the science-attentive public (see Figure G.1).

Leading NEWGEN communications efforts is a team of seasoned professionals from Pacific Northwest National Laboratory (PNNL), Oregon State University (OSU), AltaRock Energy, Inc. (AltaRock), Statoil, and General Electric (GE) Global Research. Each team member brings skills and proficiencies in reaching specific audiences and stakeholders. PNNL brings to the team its nationally recognized expertise in working with industry and collaborating with the DOE, while OSU's experience and connections will prove invaluable in reaching K-12 and higher education institutions. Working with the Ardell Group, a prominent energy technology public relations agency, AltaRock over the years has formed close relationships with local communities, governments, and media (see Appendix H). Statoil and GE bring immense experience in national and international outreach. NEWGEN will fully leverage the expertise of the communications team to maximize its communications efforts, mitigate concerns, and to ensure broad awareness of the benefits of FORGE and EGS.

In addition to their individual areas of expertise, the NEWGEN communications team boasts over 50 years of combined experience in developing and delivering messages to key stakeholders. The team will employ a combination of traditional outreach strategies and mechanisms (e.g., press outreach, conferences and tradeshow, in-person meetings) and new-media techniques (e.g., social media, search engine optimization, and mobile applications). Through these efforts, NEWGEN will establish EGS as a safe, sustainable source of renewable energy worthy of continued investment, research, and scientific pursuit.



**Figure G.1.** The NEWGEN communications team will employ a variety of cross-channel outreach methods to influence key targets and achieve FORGE goals.

## G.2 Communications Goals

In a broad stroke, the goal of NEWGEN communications is to support the FORGE goal to “accelerate breakthroughs” in EGS. NEWGEN communications will assist in accomplishing this goal by taking the following actions:

1. Building awareness among the geothermal industry and scientific community of FORGE, NEWGEN, and the frontier research opportunities made available through FORGE.
2. Establishing public support of EGS by communicating the research objectives of FORGE and the benefits of EGS.
3. Ensuring timely and accurate reporting of FORGE progress to DOE and other stakeholders, including the creation and dissemination of Financial and Technical Reports, Annual Operating Plan, an annual Peer and Program Review Report, an Induced Seismicity Mitigation Plan, and an analysis of water usage and evolution.

4. Promoting workforce development by providing geothermal curricular development materials to regional graduate, undergraduate, and K-12 educators.

### **G.3 Outreach Plan**

NEWGEN will take an audience-centric approach to communications, developing messaging, delivery methods, and accompanying materials that appeal to the targeted audiences. NEWGEN has identified seven primary audiences. The audiences and desired outcomes are as follows:

1. DOE and the Geothermal Technologies Office (GTO)
  - a. Timely submittal of quarterly and annual reports and project updates.
  - b. Coordination with DOE outreach efforts supported by DOE both relative to FORGE and outside the scope of FORGE.
2. Regulatory Agencies
  - a. Adherence to agency policies, permitting, and the safe usage of natural resources.
  - b. Positive working relationships.
3. Geothermal Scientists and Engineers
  - a. Generate interest and participation in research opportunities at the NEWGEN FORGE site.
  - b. Publish and present peer-reviewed reports of research conducted at the NEWGEN FORGE site.
4. Geothermal Industry
  - a. Provide opportunities for partnering and participating in research at the NEWGEN FORGE site.
  - b. Demonstrate the value of the National Laboratory system.
5. Local Communities and Governments
  - a. Build regional support and understanding of FORGE, NEWGEN, and EGS technology.
  - b. Highlight employment opportunities to the community from the development of long-term geothermal energy.
6. Educational Institutions
  - a. Improve literacy of geothermal science and technology.
  - b. Strengthen the workforce pipeline for the field of geothermal energy.
7. Science-Attentive Public
  - a. Build public support for EGS as a source of safe, clean, renewable energy.
  - b. Create EGS champions who will support geothermal energy development nationwide.

To succeed and ensure the right messages are communicated to the appropriate audiences, a NEWGEN communications team leader has been established. Melody Oldfield, assistant vice president of university relations and marketing at OSU will work directly with the NEWGEN FORGE management and oversee the execution of all NEWGEN outreach campaigns and efforts across all audiences. In addition to ensuring each of the communication tactics is implemented on schedule and according to budget, she will coordinate outreach efforts with the DOE. This position will evolve to Director of Communications when the full NEWGEN organization is implemented during Phase 2C.

#### **G.3.1 DOE and GTO**

NEWGEN fully understands DOE's vested interest in the success of FORGE. To ensure DOE receives timely updates and reports pertaining to FORGE in addition to information and materials for DOE outreach efforts, NEWGEN communications efforts will divide the DOE audience into two subgroups: 1) DOE project management and 2) DOE communications. Such an approach ensures DOE stakeholders receive the information relative to their needs.

## DOE Project Management

DOE project management ensures DOE-funded research aligns with DOE goals and is delivered on schedule, within budget, and according to environmental, safety, and health standards. To effectively communicate and meet the desired outcomes associated with this audience, NEWGEN will leverage the decades of experience PNNL has in successfully communicating to DOE project management.

## Conveyed Information

Project management is primarily interested in information about the status of projects, operating procedures, safety, compliance, and outcomes delivery; consequently, information conveyed to this audience will center on such.

## Method

The following strategies and tactics will be used to target this audience:

1. **Reports** – Quarterly and annual reports, including Financial and Technical Reports, an annual operating plan, an annual Peer and Program Review Report, induced seismicity and seismic hazards, and risk analysis. These reports will be distributed directly to DOE project management and meetings will be scheduled to discuss the results.
2. **Site Visit** – NEWGEN will encourage and invite DOE project management to visit and tour the NEWGEN FORGE site. Site visits will allow DOE to view, first-hand, progress being made on projects and NEWGEN to answer any questions in-person.
3. **Regular Conference Calls** – To ensure DOE project management is aware of the most recent findings and the status of projects, NEWGEN will schedule a regular conference call to discuss such matters in addition to operational and logistical issues.
4. **Newsletter** – A monthly newsletter will be distributed, highlighting research findings and key projects. This will not only provide an update to DOE stakeholders, but also allow DOE project management to forward and share NEWGEN FORGE successes with DOE constituents.

## Frequency

Status and project reports will be delivered quarterly to DOE project management, ensuring they are up-to-speed on FORGE-sponsored research. Operating plans, seismicity reports, water usage, and risk analysis will be delivered at a minimum annually. Site visits will occur at a minimum annually unless otherwise requested by DOE stakeholders. Conference calls and issuance of the NEWGEN newsletter will occur monthly. See Figure G.2 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.

## DOE Communications

The DOE communications team works to build awareness of the National Laboratory system and its national benefits. DOE communications is in need of information, materials, and outreach support to feed its communications channels and tell a cohesive, engaging story to its stakeholders.

## Information Conveyed

While the status of projects is of interest, the results of research and the effect of research on industry, the economy, and American lives is paramount to DOE outreach efforts. Consequently, when interacting with



this audience, NEWGEN communications will focus on the benefits and impact of FORGE research. NEWGEN will fully tap PNNL's success (as demonstrated by the Grid Modernization Laboratory Consortium, Small Business Voucher Pilot, etc.) in collaborating with DOE communications to ensure DOE outreach efforts are supported.

## Methods


The following methods will be used to target this audience:

1. **Conference Calls** – Regular calls between the NEWGEN communications lead and DOE communications will be set to collaborate and inform DOE of progress and success stories. DOE communications will have the opportunity to gain support for efforts outside of the FORGE scope.
2. **Press Releases** – A minimum of two FORGE-related press releases will be issued per year discussing facility milestones or individual research results. If opportunity for additional press releases arises, NEWGEN will take full advantage. The benefits of EGS will be touted as part of the press releases, and each release will align with DOE outreach objectives. DOE will receive and be able to leverage the press releases for their own efforts.
3. **Research Highlights** – A minimum of four EGS- or FORGE-related research highlights will be published annually. These research highlights will describe a research project, its status, and impact. Research highlights will be forwarded to DOE in advance of distribution and will serve as content for DOE blogs, newsletters, and other communication vehicles.
4. **Social Media Content** – Content to feed DOE social media channels will be developed on a continual basis. Additionally, NEWGEN has its own social networking accounts through which it will share content. All press releases, highlights, photos, videos, etc. will be shared over social media channels, which DOE can leverage.
5. **Photo Sharing** – A repository of images will be developed and maintained. DOE will be granted access to the repository and be able to use any images therein for DOE outreach efforts.
6. **Rich Site Summary (RSS) Feed** – As part of the NEWGEN blog, an RSS feed will be established and shared with DOE. This will allow DOE communications and stakeholders to automatically receive content posted to the NEWGEN blog, which may be of use to DOE outreach efforts.

## Frequency

While regular interaction with DOE and GTO communications has taken place as part of Phase 1 of the FORGE project, NEWGEN will expand its efforts and execute the above methods in full with the commencement of Phase 2. Calls between NEWGEN communications and DOE communications will take place monthly. Timing on press releases will be dictated somewhat by research progress; however, efforts will be made to space the distribution of press releases evenly throughout the year to maximize visibility and maintain positive relationships with journalists. Research highlights will be issued quarterly while blog posts appear weekly and social media content daily. See Figure G.2 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.

## DOE & GTO



METHODS FOR DEPARTMENT OF ENERGY AND GEOTHERMAL TECHNOLOGIES OFFICE	OUTCOME	FREQUENCY
Full-Time Communications Director	—	—
Reports	Distribution numbers	Annually   Phase 2-3
Site Visits	Number of visitors	Annually   Phase 2-3
Regular Conference Calls	Number of calls	Monthly   Phase 2-3
Newsletter	Distribution numbers	Monthly   Phase 2-3
Press Releases	Number of press releases	Ongoing   Phase 2-3
Research Highlights	Number of highlights	Quarterly   Phase 3
Cross Post on DOE Channels	Engagements and impressions	Monthly   Phase 2-3
Execute Social Media Strategy	Engagements and impressions	Daily   Phase 1-3
Photo Sharing	Number of photos	Quarterly   Phase 2-3
RSS Feed	Distribution numbers	Weekly   Phase 2-3

NGFS—2-00058

**Figure G.2.** The outcome, frequency, and timing for each communication and outreach method used to provide DOE project management with timely updates and DOE communications materials for outreach efforts.

### G.3.2 Regulatory Agencies

State and federal agencies, such as the Bureau of Land Management (BLM), the United States Forest Service (USFS), and the Oregon Department of Geology and Mineral Industries (DOGAMI), work to protect the environment, ensure responsible usage of land resources, and safeguard citizens. In addition to adhering to all required policies, NEWGEN will augment current communications with these state and federal agencies (see Appendix H) and engage in proactive efforts to further working relationships, mitigate any concerns, and maintain compliance.

## Conveyed Information

The BLM, USFS, and DOGAMI are primarily concerned with NEWGEN’s adherence to agency policies, permitting, and the safe usage of natural resources. Information conveyed to these agencies will include regulatory material, status updates, and quarterly and annual reports (see Appendix H).

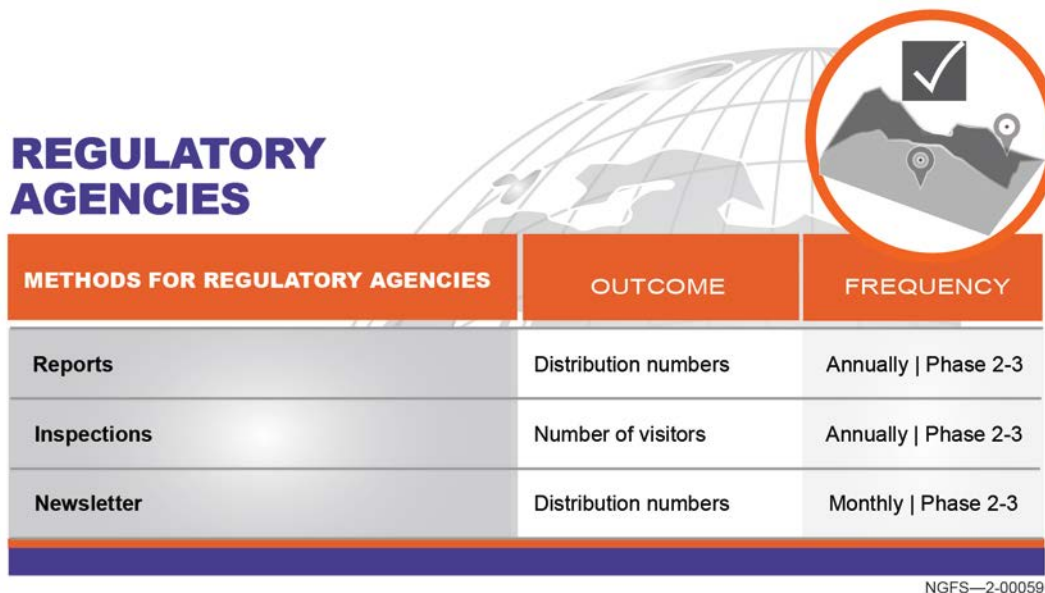
## Method

The following strategies and tactics will be used to target this audience:

1. **Reports** – Quarterly and annual reports, including Financial and Technical Reports, an annual operating plan, an annual Peer and Program Review Report, induced seismicity and seismic hazards, and risk analysis. These reports will be distributed directly to BLM, USFS, and DOGAMI as required and meetings will be scheduled to discuss the results.
2. **Inspections** – NEWGEN will fully participate in any inspections or visits to the NEWGEN FORGE site by state and federal agencies.
3. **Newsletter** – BLM, USFS, and DOGAMI agency members will be included on the distribution list of the NEWGEN monthly newsletter, highlighting research findings and key projects.

## Frequency

Status and project reports will be delivered quarterly and annually as dictated by BLM, USFS, and DOGAMI. Operating plans, seismicity reports, water usage, and risk analysis will be delivered at a minimum annually. Site visits and inspections will occur at a minimum annually unless otherwise requested by state and federal agencies. Issuance of the NEWGEN newsletter will occur monthly. See Figure G.3 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.



METHODS FOR REGULATORY AGENCIES	OUTCOME	FREQUENCY
Reports	Distribution numbers	Annually   Phase 2-3
Inspections	Number of visitors	Annually   Phase 2-3
Newsletter	Distribution numbers	Monthly   Phase 2-3

NGFS—2-00059

**Figure G.3.** The outcome, frequency, and timing for each communication and outreach method used to provide Regulatory Agencies with reports and timely updates.

### G.3.3 Geothermal Scientists and Engineers

The geothermal community's awareness of the program and participation in the research proposal process is critical to the success of FORGE and NEWGEN. Without the involvement of these geothermal scientists and engineers, FORGE will be unable to succeed in advancing EGS.

This community is composed of a range of individuals, from those beginning their careers in geothermal energy to those well into their careers. Given this range, a variety of communications preferences and media types are likely consumed by this audience—from print publications to vlogs and from e-mail to social media. Despite the variance, this audience is united under a common effort to advance geothermal energy and science.

#### Information Conveyed

Messaging to geothermal scientists and engineers will center on the capabilities of the NEWGEN FORGE site, research opportunities, and logistics in working with the FORGE facility. Members of this audience are interested in how they can participate in the NEWGEN FORGE project, examining data (see Appendix F), and learning about the results of FORGE research projects, and how these results may influence their own endeavors.

NEWGEN brings decades of experience in working with and reaching this pivotal audience. As geothermal scientists, the NEWGEN principal investigators are in-tune with this audience. Consequently, the principal investigators will work closely with the NEWGEN communications team so activities and materials resonate with this core audience. The expertise of the NEWGEN communications team in leveraging all outreach channels will then be used to ensure geothermal scientists and engineers are exposed to FORGE over their medium of choice.

#### Methods

The following methods will be used to target geothermal scientists and engineers:

1. **Publications and Presentations** – NEWGEN will stipulate that geothermal scientists and engineers conducting research at the site publish in high-impact peer-reviewed journals and present their findings at renowned international conferences at least once per year. Doing so will ensure the FORGE, as well as the facilities and capabilities available at the NEWGEN FORGE site, gain attention within the scientific community. Publication of journal special issues on FORGE research results will be encouraged. Accompanying press outreach, research highlights, and additional communications activities will be developed to take full advantage of report findings to further increase the visibility of research conducted as part of FORGE.
2. **Geothermal Organizations** – A healthy geothermal community exists, which NEWGEN will tap into to bring awareness of FORGE and research opportunities. NEWGEN will attend, sponsor, and speak at events held by the Geothermal Energy Association, Geothermal Resource Council, Stanford Geothermal Workshops, and the American Geophysical Union. Active involvement in these associations allows NEWGEN principal investigators to meet face-to-face with geothermal scientists and engineers, respond to inquiries, and form new collaborations. Booths, posters, fliers, and other collateral will be created to maximize NEWGEN's presence at the meetings sponsored by these professional organizations. The contact information of booth visitors will be stored in the stakeholder engagement status database for follow-up conversations and interactions.
3. **Conduct EGS Workshop** – Given the accessibility and hotels accommodations of Bend, Oregon, and the proximity of the NEWGEN FORGE site, NEWGEN is in prime position to host annual EGS workshops in Bend. NEWGEN will invite scientists and engineers to participate in an annual

workshop at which current findings and potential new research ideas for the site will be presented and discussed. Tours of the site will be organized. NEWGEN will seek to collaborate with and invite the American Geophysical Union, the Geological Society of America, the Seismological Society of America, the Society of Petroleum Engineers, the Geothermal Energy Association, the Geothermal Resource Council, and the Stanford Geothermal Workshops to bring great visibility and attendance to this dedicated workshop.

4. **Press Outreach** – In addition to publishing findings, NEWGEN will seek to place stories within geothermal and energy trade publications, such as *Power* and *Renewable Energy World*. Such press coverage will increase the visibility of FORGE among geothermal scientists and professionals. PNNL, OSU, and AltaRock have existing relationships with these publications that can be used.
5. **Website** – NEWGEN will develop a website showcasing the NEWGEN FORGE site, its facilities, capabilities, research opportunities, and instructions on how to access the Geothermal Data Repository (see Appendix F). The site URL will be featured on communications materials—press releases, social media, fliers, brochures, etc.—as a means for this audience to gain additional information about FORGE and contact NEWGEN.
6. **Virtual Tour** – Featured on the NEWGEN website will be a virtual tour of the NEWGEN FORGE site, showcasing its facilities and capabilities. This will allow geothermal scientists, particularly those that are unable to travel to the NEWGEN FORGE site, to gain a better sense of the area and whether it aligns well with their research objectives.
7. **Social Media** – As part of NEWGEN’s social media outreach, content catering specifically to geothermal scientists and engineers will be created and disseminated. A LinkedIn page specific to NEWGEN will be created where geothermal scientists and professionals can discuss FORGE, ask questions, and receive responses from group members. NEWGEN researchers will be encouraged to post FORGE information to LinkedIn Groups, geothermal-related forums, and other social media channels. Twitter and Facebook pages will also be created. The social media channels of PNNL, OSU, and AltaRock will be leveraged to bring greater visibility to FORGE and NEWGEN. For example, PNNL’s Google+ page has more than 200,000 members, which NEWGEN will be able to tap into.

## Frequency

The ground work for reaching geothermal scientists and engineers is well underway. NEWGEN principal investigators have existing relationships with the Geothermal Energy Association, Geothermal Resource Council, and Stanford Geothermal Workshops. Additionally, an independent NEWGEN website has been developed as part of Phase 1 and there have been ongoing press interactions.

Full execution of the methods to reach geothermal scientists and engineers will commence with Phase 2c of FORGE. There will be multiple published reports per year. NEWGEN will participate in Geothermal Energy Association, Geothermal Resource Council, and Stanford Geothermal Workshops annual meetings (total of three annual events) in addition to conducting its own annual workshop. Outreach to trade publications will be ongoing throughout the duration of the project, as will social media activities. See Figure G.4 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.

## GEOTHERMAL SCIENTISTS AND ENGINEERS



METHODS FOR GEOTHERMAL SCIENTISTS & ENGINEERS	OUTCOME	FREQUENCY
Full-Time Communications Director	—	—
Publications and Presentations	Number of publications	Ongoing   Phase 3
Geothermal Organizations	Track participation	3 Annually   Phase 2-3
Conduct EGS Workshop	Track participation	Annually   Phase 3
Trade Publications	Number of articles placed	Quarterly   Phase 2-3
Website	Track website traffic	Monthly   Phase 1-3
Virtual Tour	Track website traffic	Annually   Phase 2-3
Execute Social Media Strategy	Engagements and impressions	Daily   Phase 1-3

NGFS—2-00060

**Figure G.4.** The outcome, frequency, and timing for each communication and outreach method used to provide the Geothermal Scientists and Engineers audience with information about how they can participate in FORGE and learn the results of FORGE research projects.

### G.3.4 Industry

While additional research is needed to advance EGS, the technology is not new and has healthy level of established industry players and activities. Geothermal businesses include large corporations like Berkshire Hathaway, where geothermal is one of several business avenues, and corporations like Ormat and U.S. Geothermal, where geothermal energy is the primary business. Regardless of size, these corporations are interested in new, more efficient and cost-effective technologies.

#### Information Conveyed

Given that corporations are interested in the advancement of geothermal to accelerate their business endeavors, information conveyed to this audience should focus on research findings, the value of FORGE, and how commercial implementation of FORGE research results will reduce risk, increase production, and lower costs in relevant geothermal fields.

#### Methods

The following methods will be used to target the geothermal industry:

1. **Conferences and Events** – To reach geothermal industry stakeholders, NEWGEN will attend conferences and event hosted by the Geothermal Energy Association, the Geothermal Resource

Council, and the Stanford Geothermal Workshops. NEWGEN will use these events to form new relationships with industry and meet, in-person, with businesses to discuss research results and practical implementation ideas.

2. **In-Person Meetings** – NEWGEN will reach out to industry leaders and schedule face-to-face meetings to discuss business needs and collaboration opportunities.
3. **E-mail Campaigns** – As NEWGEN interacts with corporations and potential business partners, NEWGEN will maintain a list of names and contact information. NEWGEN will use this list to e-mail information, research findings, and research opportunities to industry contacts.
4. **Webinar** – NEWGEN will host an annual webinar geared toward informing industry of FORGE, research findings, and research opportunities. As part of the webinars, NEWGEN will solicit participation from corporations already involved and leveraging FORGE. Such an approach will establish a track record of success with industry leaders and incentivize their participation.
5. **Conduct EGS Workshop** – Industry stakeholders will be invited to participate in NEWGEN’s annual scientific workshop (cf. 3.2). During the workshop and site tour, case studies of successful research will be presented, demonstrating the value of FORGE.

### Frequency

Efforts to partner and reach industry are well underway. NEWGEN will participate in events hosted by the Geothermal Energy Association, the Geothermal Resource Council, and Stanford Geothermal Workshops on an annual basis. In-person meetings will be scheduled as needed on an ongoing basis. NEWGEN will host the industry webinar annually along with the scientific workshop. E-mail campaigns will be conducted quarterly. See Figure G.5 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.



METHODS FOR GEOTHERMAL INDUSTRY	OUTCOME	FREQUENCY
Full-Time Communications Director	—	—
Conferences and Events	Track participation	Phase 2-3
In-person Meetings	Track meetings	Ongoing   Phase 1-3
Email Campaigns	Distribution numbers	Monthly   Phase 2-3
Webinars	Track participation	Annually   Phase 3
Conduct EGS Workshop	Track participation	Annually   Phase 3

NGFS—2-00061

**Figure G.5.** The outcome, frequency, and timing for each communication and outreach method used to provide the Geothermal Industry audience with information about how corporations can be involved with new, more efficient, and cost-effective EGS technologies.

### G.3.5 Local Communities and Governments

While the demographics and socioeconomics of the area surrounding the NEWGEN FORGE site are diverse, residents share a common concern for their well-being. Due to the nature of drilling and stimulating geothermal well reservoirs, community members may have concerns over the safety and environmental performance of EGS. Such apprehensions are not to be dismissed nor underestimated. To mitigate these concerns and gain community support, NEWGEN communications will divide this audience into two subgroups: 1) local governments and 2) local residents.

#### Local Governments

Local politicians represent the voice of their communities. In addition to the well-being of their communities, they are concerned with actively representing the voice and sentiment of their constituents. As public figures, they are also in a position to influence public discourse. NEWGEN's successful operation is contingent on government leaders' awareness and support of EGS.

#### Information Conveyed

Outreach to local politicians will focus on the positive impacts of NEWGEN in the area, both economically and socially. Safety and environmental concerns will be addressed. Rather than attempt to shroud or downplay concerns, NEWGEN will address concerns openly using scientific evidence to demonstrate the safety of EGS and improve understanding of the technology. Conveyed information and outreach efforts will seek to establish and frame FORGE as a project local communities can be proud to host.

Through the Ardell Group, AltaRock has already made significant inroads in gaining the support of city governments (i.e., Bend, La Pine, and Sunriver, Oregon) and state representatives. AltaRock has been meeting regularly with local politicians for several years and has successfully gained the support of representatives. NEWGEN communications will continue to strengthen these relationships while also expanding them to include additional state officials in Oregon and Washington.

#### Methods

The following methods will be used to target local governments:

1. **Regular Reports** – similar to communicating with DOE project management, NEWGEN will develop and share regular status reports, including seismic and water-usage reports with local representatives. The economic benefits of FORGE will also be quantified and presented annually. Estimates for potential royalty revenues and jobs associated with future commercial development will be updated and presented as research advances.
2. **In-Person Meetings** – to ensure concerns are addressed and reports are received and understood, NEWGEN principal investigators and representatives will meet regularly and in-person with local government representatives. During these meetings, publicly available research findings will be shared to demonstrate the value of FORGE and EGS.
3. **Site Visits** – the accessibility of the NEWGEN FORGE site allows NEWGEN to give tours to local politicians. On an annual basis, NEWGEN will invite local government officials to visit the site. These tours will not only provide an opportunity to strengthen relationships, but will be a catalyst to turning local representatives into proponents of FORGE and EGS.
4. **Research Highlights** – to excite local governments about EGS and the discoveries being made at NEWGEN, research findings and their potential benefits to the community and nation will be shared with local governments. These findings will be written in a way that can be easily understood and shared by government representatives.



## Frequency

As mentioned, positive relationships with local governments currently exist due to the efforts of AltaRock and the Ardell Group. NEWGEN communications will focus on maintaining and strengthening these relationships. Reports will be shared semiannually with local governments. In-person meetings will be conducted in conjunction with the bi-annual reports. Additionally, local politicians will be invited to the site annually and receive descriptions of research findings quarterly. Full execution of the plan targeting local governments will commence with Phase 2. See Figure G.6 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.



**LOCAL COMMUNITIES AND GOVERNMENTS**

METHODS FOR LOCAL COMMUNITY AND GOVERNMENTS	OUTCOME	FREQUENCY
Full-Time Communications Director	—	—
Reports	Distribution numbers	Biannually   Phase 2-3
In-person Meetings	Track meetings	Ongoing   Phase 1-3
Site Visits	Number of visitors	Annually   Phase 1-3
Research Highlights	Number of highlights	Quarterly   Phase 3
Visitor Center	Number of visitors	One Time   Phase 3
Business Organizations	Track meetings	Annually   Phase 1-3
Blog	Track website traffic	Monthly   Phase 1-3
Website	Track website traffic	Weekly   Phase 1-3
Community Service Event	Track participation	Annually   Phase 3
Mobile Game Application	Downloads	One Time   Phase 3
Museum Exhibits	Number of exhibits	Annually   Phase 3
Public Speaking Forums	Number of events	Biannually   Phase 3
Press Releases	Number of press releases	Ongoing   Phase 1-3

NGFS—2-00062

**Figure G.6.** The outcome, frequency, and timing for each communication and outreach method used to provide the Local Communities and Governments audience with information about why EGS technology is safe and the benefits of FORGE to the community.

## Local Residents and Visitors

Newberry Volcano is located in Deschutes County, the fastest growing county in Oregon. Over 150,000 residents live in the county. Bend is the largest metropolitan area with La Pine and Sunriver close by. Tourism ranks as one of the largest industries in the area, with visitors enjoying the many nearby outdoor and recreational activities. Given the livelihood of many residents depends on the pristineness of the surrounding wildlife, local residents are concerned not only with their safety and health, but also the environmental and subsequent economic effects of EGS. NEWGEN communications will seek to gain the support of local residents and establish FORGE as a project they can be proud to be a part of.

## Information Conveyed

Communications activities and materials directed toward local residents will convey EGS as a source of safe, clean, renewable energy. Information will address the safety concerns of EGS in a clear, concise manner using research and data. Likewise, the benefits of EGS and the need for further research will be conveyed so as to gain public support and local advocates of FORGE.

## Methods

The following methods will be used to target local residents:

1. **Visitor Center** – on the OSU-Cascades campus in Bend, Oregon, NEWGEN will build a visitor center, where patrons can learn more about FORGE and EGS. In addition to EGS displays and exhibits, the facility will include work spaces and meeting areas for scientists and stakeholders conducting projects at NEWGEN.
2. **Business Organizations** – to mitigate concerns and maintain the interest in geothermal energy and support for NEWGEN as part of the local community, NEWGEN will continue to schedule regular speaking engagement with local business organizations, such as the Rotary Club, City Club, and local visitor bureaus.
3. **Blog** – to communicate core messages through compelling stories, NEWGEN will maintain a blog. EGS, research findings, and safety concerns will be addressed through the blog. An RSS feed will be established, allowing visitors to subscribe to the blog and receive posts automatically. A monthly summary of blog posts will be distributed via e-mail.
4. **Website** – as part of the NEWGEN website, information pertaining to safety concerns and environmental effects will be posted.
5. **Community Service Event** – partnering with the Lava Lands Visitor Center or Paulina Visitor Center, NEWGEN will host a park clean-up or community building event. NEWGEN will invite community members and encourage local schools to participate.
6. **Mobile Game App** – to communicate EGS in a fun and entertaining way, NEWGEN will create a mobile game app through which users can create and own their own EGS. The app will also be used at visitor center kiosks or as part of exhibits.
7. **Museum Exhibits** – working with local museums and visitor centers, such as Lava Lands Visitor Center, NEWGEN will set up exhibits educating patron on EGS, the potential of geothermal energy, FORGE, and the need for geothermal research. The exhibits will be updated as needed with new findings.
8. **Public Speaking Forums** – NEWGEN will seek to participate in several existing public forums within the surrounding area. These forums include OSU-Cascade's Science Pub, the Historical Society's History Pub, and the Obsidian Series. Participating in these forums will allow NEWGEN to not only address community concerns and gain support, but also observe what misgivings residents may have about EGS. These observations will inform communications materials.

9. **Press Outreach** – as part of local outreach efforts, NEWGEN will place stories with local newspapers and publications, such as the *Oregonian*, *The Bulletin*, and *The Source Weekly*. NEWGEN will send press releases and news updates to these local outlets and seek to schedule press interviews with the principal investigators.

## Frequency

Much work has already been done by AltaRock to gain public support of EGS. NEWGEN will escalate outreach efforts through the implementation of the above methods. The website, blog, and press outreach have already begun. Full implementation of the communications plan to reach local residents will commence with Phase 3. Meetings with business organizations will occur semiannually. Participation in public speaking forums will be done annually as will the community service event. The NEWGEN blog will be updated weekly with a newsletter going out monthly. Press outreach will be ongoing and coincide with news announcements and public release of research findings. See Figure G.6 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.

### G.3.6 Educational Institutions

The future of EGS will depend on tomorrow's workforce. As such, educating students about EGS, their potential, benefits, and the science behind geothermal energy is critical to building a future workforce. To meet this goal, NEWGEN will engage in outreach efforts targeting two subgroups: 1) local K-12 schools and 2) universities.

#### K-12 Schools

Basic science is a core subject of elementary, middle-school, and high-school learning. Interest in Science, Technology, Engineering, and Mathematics varies across this audience; however, students generally share a common curiosity about the world in which they live. Reaching this audience is contingent on educators. While much of an educator's curriculum is set, there is opportunity for influence through assemblies, field trips, and guest appearances.

#### Conveyed Information

Foremost, information conveyed to this audience must align with course curriculum and education goals. Subsequently, NEWGEN will focus on communicating the science behind EGS, as well as how geothermal energy reduces carbon emissions and is a viable source of renewable energy. FORGE will be used as a real-world example of Science, Technology, Engineering, and Mathematics application to pique student curiosity about geothermal research and bring awareness to the field as a possible career path.

#### Methods

The following methods will be used to target K-12 schools:

1. **Visits to Schools** – The principal investigators will identify NEWGEN researchers as candidates to visit local K-12 schools and present about EGS. NEWGEN will work with local educators to schedule visits and shape the presentation to align with curriculum and age groups.
2. **Virtual Tour/Demonstration** – To “show” students how a geothermal plant operates, a robust virtual tour and demonstration of the NEWGEN FORGE site will be developed. This will be an engaging and entertaining way to demonstrate EGS.
3. **Science Fair Competition** – NEWGEN will host a local science fair competition where the winning class earns a private tour of the NEWGEN FORGE site.

4. **Mobile Game App** – When visiting classrooms or hosting site visits, the mobile app developed as part local resident outreach will be shared with students. The app will provide a fun, entertaining way for students to learn more about EGS and their benefits.
5. **Community Event** – In conjunction with outreach to local residents, NEWGEN will invite local K-12 schools to participate in the annual community event.
6. **Boys and Girls Scouts Programs** – Geology-based learning badges exist for both Boys and Girls Scouts programs. NEWGEN will reach out to local troops and offer the opportunity for a NEWGEN researcher to make a guest appearance and present information about EGS.

### Frequency

Outreach to K-12 schools will begin during Phase 2. The field trip to the site will take place during the spring and summer months. School visits will be conducted every other month during the school year. See Figure G.7 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.



METHODS FOR EDUCATIONAL INSTITUTIONS	OUTCOME	FREQUENCY
Full-Time Communications Director	—	—
Visits to Schools	Number of visits	Bimonthly   Phase 3
Science Fair Competition	Track participation	Annually   Phase 3
Virtual Tour	Track website traffic	Annually   Phase 2-3
Mobile Game Application	Downloads	One Time   Phase 3
Community Service Event	Track participation	Annually   Phase 3
Curriculum Materials for EGS Degree	Classroom adoption rates	Annually   Phase 2-3
Online Curriculum	Classroom adoption rates	Annually   Phase 2-3
Internship Program	Number of qualified applicants	Annually   Phase 2-3
Guest Lectures	Number of lectures	Quarterly   Phase 2-3
Research Competition	Track participation	Annually   Phase 3

NGFS—2-00063

**Figure G.7.** The outcome, frequency, and timing for each communication and outreach method used to provide the Educational Institutions audience with the tools needed to educate students about EGS and encourage them to pursue a career in the EGS field.

## Higher Education

The average age of U.S. college students is 18 to 24 years. Vocational interests typically shape curricula and majors. As such, communications efforts can be more targeted to reach students that have already expressed an interest in a field related to geothermal science. College students are simultaneously interested in expanding their understanding and building career opportunities.

As with K-12 students, working with educators is essential to reaching students. Unlike K-12 educators, college professors have more latitude when it comes to curriculum and there are more opportunities for influence.

## Conveyed Information

To reach college students, information shared with this audience should focus on the science of EGS, professional opportunities, and the impact their participation will have in advancing science and benefiting the world.

NEWGEN will fully leverage OSU's extensive experience in reaching college students. Furthermore, OSU offers direct access to a university system through which NEWGEN build and test programs designed to inspire college students to pursue careers in geothermal energy.

## Methods

The following methods will be used to target college students:

1. **Curricular Materials** – Course syllabi and curricular materials for EGS degree concentrations will be developed for classes at OSU-Cascades, Corvallis Oregon Institute of Technology, and through OSU's nationally ranked E-campus. Doing so will allow NEWGEN to be included and mentioned in curriculum, as well as strengthen relationships with OSU staff and professors.
2. **Online Curriculum** – For educators and universities looking for additional material and information related to geothermal studies, NEWGEN will develop an online curriculum. This will provide additional opportunities for students regionally and nationally to learn and be exposed to FORGE and EGS research.
3. **Internship Program** – To stimulate an immediate pipeline of geothermal scientists, NEWGEN will develop an internship program. The proposed program, entitled Building a Diverse Geothermal Energy Sector (BADGES) will identify and nurture a cohort of talented undergraduate students that might not be aware of the career potential of the EGS sector. The BADGES Program will be administered at OSU, which will work closely with partner academic institutions and local community colleges to identify promising undergraduates from groups traditionally underrepresented in the geothermal industry and to link them with academic, industry and National Laboratory mentors.
4. **Guest Lectures** – NEWGEN researchers will make guest appearances and lectures at universities in the Pacific Northwest. These lectures will focus on the science of EGS, their energy potential, and need for continual research. Internship information and curriculum materials will be shared as part of these lectures.
5. **Research Competition** – To promote geothermal studies at universities, NEWGEN will sponsor a Student Research Competition. Teams from participating universities will submit geothermal research ideas, which will be judged by NEWGEN researchers. The winning team will receive a cash prize and trip to the NEWGEN FORGE site.

## Frequency

Outreach efforts to higher education institutions will commence during Phase 2. Curricular materials will be updated annually to incorporate the most recent FORGE findings. The internship program will occur annually during the summer months and the research competition will occur annually during winter/spring semesters and quarters. Guest lectures will be ongoing, with the goal of conducting one per quarter. See Figure G.7 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.

### G.3.7 Science-Attentive Public

Reducing carbon emissions and developing renewable sources of energy are national issues. As such, a significant population within the United States takes great interest in research, new technologies, and efforts to advance renewable energy. Communicating to and engaging this population is of value to generating public awareness and support of EGS. Armed with the right information, the science-attentive public can become strong allies in bringing awareness to FORGE.

#### Conveyed Information

Information geared toward this audience should center on the discoveries being made due to FORGE and the impact these discoveries could have in reducing carbon emissions and establishing EGS as viable energy sources. Similar to the information shared with local residents, materials will need to address environmental and safety concerns.

#### Methods

The following methods will be used to target the science-attentive public:

1. **Website** – As part of the NEWGEN website, information will be posted and made available to explain EGS, the energy potential, and need for additional research. Environmental and safety concerns will be addressed. Research updates and findings will be made public on the site, arming website visitors with the latest information.
2. **Blog** – A blog discussing EGS and addressing concerns will be developed and updated weekly. Posts will be shareable over social media channels and be written in a way that non-technical readers will be able to understand and learn about EGS. This will result in a constant flow of information that will not only feed new content to the science-attentive public, but also improve the search engine optimization of the NEWGEN website, thereby improving visibility of NEWGEN and the FORGE on search engine pages.
3. **Social Media** – Accounts on Facebook, Twitter, and Instagram will be created and maintained to share EGS information and engage with the science-attentive public. Photos, infographics, and videos will be generated to be shared over these channels.
4. **Press Outreach** – Building on NEWGEN’s success with targeting local media, national journalists will be added to NEWGEN’s outreach efforts. NEWGEN will seek to place stories in national newspapers, such as *The Wall Street Journal*, *Washington Post*, *USA Today*, and *New York Times*, online-only publications, such as *The Huffington Post* and *Mashable*, and broadcast media, such as NPR and NOVA productions.
5. **Videos** – Engaging and informative videos will be developed discussing EGS, their potential, and FORGE. These videos will be posted to popular video-sharing sites, such as YouTube and Vimeo.
6. **Media Training** – To maximize on press opportunities, NEWGEN principal investigators will be media trained.

## Frequency

Communication efforts to reach the science-attentive public will be ongoing and have already commenced. The NEWGEN website will be updated regularly, blog posts will appear weekly, videos will be generated quarterly during Phase 3, and information will be posted to social media channels on a daily basis. See Figure G.8 for a detailed chart depicting the timing, frequency, and cost for the communications methods used to reach this audience.



METHODS FOR SCIENCE ATTENTIVE PUBLIC	OUTCOME	FREQUENCY
Full-Time Communications Director	—	—
Website	Track website traffic	Weekly   Phase 1-3
Blog	Track website traffic	Monthly   Phase 1-3
Execute Social Media Strategy	Engagements and impressions	Daily   Phase 1-3
Press Releases	Number of press releases	Ongoing   Phase 1-3
Videos	Track website traffic	Quarterly   Phase 1-3
Media Training	Training completion	Annually   Phase 2

NGFS—2-00064

**Figure G.8.** The outcome, frequency, and timing for each communication and outreach method used to engage the science-attentive public audience and generate awareness and support of EGS.

### G.3.8 Conflict Resolution

As indicated in the Environmental, Safety and Health Plan (see Appendix K), NEWGEN is committed to preserving the integrity of the NEWGEN FORGE site. However, given the nature of EGS there are likely to be concerns about the safety and environmental impact of the technology. NEWGEN will build upon the success of AltaRock in reaching out to stakeholders and the local community and seek to proactively mitigate concerns. The open dialogue that has already been created allows NEWGEN to address public and stakeholder concerns before they become conflicts and will prove invaluable in resolving issues should conflicts arise. NEWGEN will adhere to the following process when addressing conflicts:

1. **Acknowledge** – Concerns may arise via a variety of channels—direct e-mail, social media, phone calls, public forums, etc. To be viewed as “attentive” to every concern, NEWGEN will acknowledge each concern and take immediate steps to resolve it. While a resolution may not be readily achievable, at the very least NEWGEN will respond and inform the individual or group that their concern is acknowledged and will be addressed.

2. **Background Information** – Once a concern is acknowledged, background information will be gathered and assessed to determine the correct course of action. The identity of the concerned individual or group, their interaction history with NEWGEN, the nature of the concern, and other factors will be taken into account.
3. **Course of Action** – An appropriate response to the concern will be developed after assessment of the background information. If appropriate, a face-to-face meeting will be scheduled.
4. **Resolve** – Wherever possible, NEWGEN will seek to resolve conflicts via direct interaction with the concerned individual or group. For example, if a concern is directed at NEWGEN publicly over social media or a forum, NEWGEN will seek to resolve the conflict via e-mail, phone calls, or meetings. This will demonstrate NEWGEN’s sincerity.
5. **Record** – A record of any conflict or concern will be kept to inform future conflict resolutions and be available for any liability reasons should such arise.

### Crisis Communications

In the event of a crisis, the NEWGEN community and constituents associated with the NEWGEN FORGE site must be informed of decisions and be prepared to respond. To do so effectively, they must be made aware of relevant information through clear, consistent, and complete communications. These timely communications provide for the health, safety, and security of individuals at the NEWGEN FORGE site and in the greater community.

This plan will provide policies and procedures for the coordination of communication at the NEWGEN FORGE site, as well as communication between NEWGEN partners, the media, and the general public. Incidents requiring activation of the plan are wide-ranging and include—but are not limited to—natural disasters, weather, deaths, threats or acts of violence, power outages, personnel actions, arrests or protests regarding social/civil issues, crimes or similar incidents, and other significant controversies requiring a response.

The NEWGEN communications team will provide consistent, aligned, and timely communications in all crisis situations through the following tactics:

1. Determine how NEWGEN communicates during each unique crisis situation.
2. Identify individuals responsible for creating, approving, and executing crisis communications.
3. Identify the need to create a consolidated team of NEWGEN communication partners based on each specific crisis that includes the following participants:
  - a. internal NEWGEN communication experts from PNNL, OSU, AltaRock, and any future partners
  - b. external NEWGEN communication partners.
4. Implement clear, consistent and standardized processes and actions designed to:
  - a. identify constituencies to be informed about the situation
  - b. communicate facts about the crisis immediately through appropriate channels/media
  - c. minimize misinformation through provision of timely information and ongoing updates
  - d. provide ongoing and updated communications throughout the cycle of a crisis.
5. Summarize communication efforts/results after each event.



### **G.3.9 Materials**

As part of NEWGEN communications efforts, marketing and communications materials will be developed and distributed. At a minimum the following materials will be developed:

1. a fact sheet about geothermal energy—why it is important, its benefits, etc.
2. a brochure about FORGE, geothermal energy, and the Newberry Volcano
3. a video about FORGE, geothermal energy, and the Newberry Volcano
4. a website focusing on the NEWGEN FORGE site, with background on 1) FORGE; 2) geothermal energy; and 3) the NEWGEN partners
5. a list of frequently asked questions to address potential conflict regarding safety and other issues
6. a message platform with talking points for each audience so all NEWGEN partners have a similar voice
7. a list of experts from the partner agencies for use by news media, or for contact by interested political, education, and community leaders
8. a timeline of activities (see Figure G.9)
9. a mobile app.

### **G.3.10 Timing**

The timing of communications activities is summarized in Figure G.9.

AUDIENCE	TACTIC	PHASE 1	PHASE 2	PHASE 3
<b>3.1 DOE and GTO</b>				
● 3.1.1 DOE Project Management	Reports			
	Site Visits			
	Regular Conference Calls			
	Newsletter			
● 3.1.2 DOE Communications	Press Releases			
	Research Highlights			
	Cross Post on DOE Channels			
	Execute Social Media Strategy			
	Photo Sharing			
	RSS Feed			
<b>3.2 Regulatory Agencies</b>				
	Reports			
	Inspections			
	Newsletter			
<b>3.3 Geothermal Scientists and Engineers</b>				
	Publications and Presentations			
	Geothermal Organizations			
	Conduct EGS Workshop			
	Trade Publications			
	Website			
	Virtual Tour			
	Execute Social Media Strategy			
<b>3.4 Geothermal Industry</b>				
	Conferences and Events			
	In-person Meetings			
	Email Campaigns			
	Webinars			
	Conduct EGS Workshop			
<b>3.5 Local Communities and Gov't</b>				
● 3.5.1 Local Governments	Reports			
	In-person Meetings			
	Site Visits			
	Research Highlights			
● 3.5.2 Local Residents and Visitors	Visitor Center			
	Business Organizations			
	Blog			
	Website			
	Community Service Event			
	Mobile Game App			
	Museum Exhibits			
	Public Speaking Forums			
	Press Releases			
<b>3.6 Educational Institutions</b>				
● 3.6.1 K-12 Schools	Visits to Schools			
	Science Fair Competition			
	Virtual Tour			
	Mobile Game Application			
	Community Service Event			
● 3.6.2 Higher Education	Curriculum Materials for EGS Degree			
	Online Curriculum			
	Internship Program			
	Guest Lectures			
	Research Competition			
<b>3.7 Science Attentive Public</b>				
	Website			
	Blog			
	Execute Social Media Strategy			
	Press Releases			
	Videos			
	Media Training			

NGFS—2-00065

**Figure G.9.** The timeline for the entire NEWGEN C&O plan used to build awareness of FORGE at Newberry Volcano, increase public literacy of EGS, garner local support, and foster research to further EGS development.