Benchmarking Best Practices in Solar Energy Sector: Scope of Green Human Resource Management

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Abstract
In recent times, with climate change creating a massive impact on the environment and the sustenance of life on earth, the emergence of green energy companies has become a significant industrial development. The traditional view of solar energy firms, from an economical perspective, has undergone a sea change over the past few decades and is gradually giving way to a sustainable development-focused, competency-based and strategic view. The best practices with environmental and social concerns have gained great significance in the renewable energy sector, during recent times by many countries in the pursuit of sustainable development goals. These include the development of new environmental initiatives and roles with significant management ramifications. This necessitates high levels of technical and managerial competencies, for personnel working in corporate green HR. In general, the term "Green HR" refers to human resources practices that are friendly to the environment and help preserve a company's limited supply of natural resources. Environmental considerations in human resource management (HRM) are notably few, in the existing studies on solar energy. Green HRM is still a work in progress when it comes to developing green HRM practices including literature, processes, and models, as well as measuring their influence on overall company performance. Stakeholders from a variety of backgrounds are increasing the pressure on businesses to adopt green HR practices and initiatives as part of their overall business goals. A review of existing Green HRM practices and the strategic use and examining the scope of these practices in various HR activities among the best practices of the solar energy sector, are the general goals of this study for which literature review methodology has been adopted. It is hoped that this work would trigger the interest of researchers interested in learning more about incorporating green human resource management as a best practice in the solar energy sector.

Keywords: solar energy, green HRM, environmental management systems, corporate social responsibility, green orientation

Clean energy obtained from the sun in the form of light or heat, is known as solar energy. It is technically and economically feasible to convert solar energy into thermal, electrical and other forms of energy, making it suitable for diverse applications in the residential and industrial sectors. The costs involved in the establishment of solar power systems have gone down significantly during the last two decades, making this environment-friendly and practically maintenance free energy, highly attractive and affordable too.

Solar Energy industries, while benchmarking the best HR practices, should actively evaluate all social and environmental issues that could be impacted and controlled by them to actively concentrate on financial performance for long-term sustainability and growth. When making decisions pertaining to the expansion of a company, the environmental implications that are likely to emerge, call for consideration. To ensure that future generations can survive, green management aims to convey the necessity for a balance between industrial progress and environmental preservation. There is an ongoing debate, and doubts exist regarding whether green management can help a firm or the whole community to become more sustainable, which offers the door for future study into how enterprises might generate a sustainable competitive advantage through green management. This demands a high degree of technical and administrative expertise among workers to establish innovative green management programmes, which have a decisive influence on a firm's competitive advantage. The creation of new technological and managerial competencies is essential for environmental innovation, besides educational

and training resources.

In the solar energy sector, emerging areas like green marketing, accounting, and management still have many gaps in human resource management (HRM) literature, on the HR implications of environmental management, that is, green HRM, despite the wealth of research in these areas. Green HRM projects, which integrate environmental management into larger HRM practices, are becoming more popular. HRM policies and practices may be used to enhance solar energy companies' commitments to environmental sustainability by promoting the intelligent and environment-friendly use of resources.

1. Importance of Green HRM
Human resource management experts in the solar energy sector have recently begun to understand the importance and implications of "Green HRM." In its simplest application, green HRM, insists upon the need to use as little paper as possible in all HR tasks including hiring and training to establish a long-term competitive edge via employee engagement. Green HRM helps a business minimise its carbon emissions and secure carbon credits, which assume great importance in the global economy.

In the fast paced solar energy sector, HR policies and procedures, as well as other corporate and strategic challenges, might be significantly impacted by this embryonic but vital issue in management. Green HRM includes all actions related to recruitment, performance management, and training and development, pay and reward management. Employee engagement, dedication, morale, quality of life at work, and green HR management that is fair and equal may boost employee satisfaction and loyalty. These assume particular importance in the characteristic field and outdoor work environment to which a large number of employees in the solar energy firms are typically exposed, while discharging their duties.

2. Literature Review
Environmental and worker health and safety improvements are viewed by researchers as the two most significant outcomes of green efforts; and a better informed workforce and supervisors.
Wehrmeyer emphasises that corporate environmental management requires green discipline management as a prerequisite. He suggests that new recruits be trained to view and adopt corporate environmental practices seriously (Wehrmeyer, 1996, p. 32). Further, green HRM practices are considered as not restricted to only adopting environmental efforts, but also establishing methods that promote sustainable people management.
Some researchers opine that HR is the driving factor behind an organisation's green culture because it aligns its processes and policies with long-term objectives that focus upon the environment.
What Renwick refers to as "green HRM" includes a whole range of activities from selection to reward systems (Renwick et al., 2008, p. 4).
The need to turn off PCs, televisions and lights whenever employees enter or leave an organisation, attempts to use renewable energy wherever feasible, and the need for natural, intranet schemes for car-pooling and consequent reduction of fuel emissions, besides the use of natural and solar lighting are among prominent, and yet easy to practise, green HR practises which have been suggested by researchers like Davies and Smith (Davies & Smith, 2007, p. 33).
HR information management systems like e-HR systems are suggested by contemporary researchers like Beechinor for management and their employees to continuously monitor and reduce their own carbon emissions. (Beechinor, 2007, p. 34)
Green management requires employees to be motivated, empowered, and ecologically informed to be effective, according to Callenbach (Callenbach et al., 1993, p. 3). A high degree of technical and managerial expertise is required for firms to successfully execute green management programmes and stimulate environmental innovation.

3. Need for Solar Energy Firms to Adopt Green HRM Practices
A solar energy company has among its objectives, cost reduction, fulfilment of the company's obligation to the community, acquisition of talent, gaining a competitive advantage in the market, and adopting the best practices to safeguard the environment. As such, a few of these objectives may be achieved by adopting green HRM practices. An organisation may decide to embrace green HRM practices for the following reasons:

3.1 Preservation of Natural Environment
The natural environment includes things like trees, woods, rivers, and animals, all of which are not man-made. Using less paper and emitting less carbon dioxide in the workplace by using online recruiting and advertising, as well as educating employees through electronic means and reducing paper waste, are all examples of such green HR practices. Solar energy firms inherently contribute to the preservation of the natural environment and hence adapt themselves well to green HR practices.

3.2 Improvement of Employee Morale by Providing Hygienic Environment
For example, planting trees and other plants in the workplace, banning smoking in the workplace, reducing the amount of paperwork (which slows down employees), and serving fresh food and natural drinks at meetings may promote the creation of a healthy and pleasant working environment, which may enhance the morale of employees.

3.3 Ensure Corporate Social Responsibility to Get an Edge in the Marketplace
It is a well-known fact that no company can ignore the importance of corporate social responsibility these days. Green Human Resource Management is an effective way for a company to stand out from the competition and emerge as a market leader.

3.4 Reduction in the Costs
It is possible to minimise absenteeism, turnover, and employee weariness by creating a pleasant work environment. Reduced costs are the end outcome. It's also possible to cut down on waste by using less paper and sharing and documenting information online.

3.5 Enhancement of Company Brand
Green HRM practices are evidently helpful in improving the company's image and brand in the market, as they eventually emerge as market leaders, in a supportive environment.

3.6 Reduce the Involvement of Government and Other Law Enforcement Authorities
It's possible that implementing sound HR and green management practices may reduce the need for government intervention.

3.7 Educate Workers on Environmental Issues and How to Reduce Their Impact on the Environment
Employees who are environmentally aware and eco-friendly because of their employers' use of green HRM practices are better corporate citizens in the eyes of the environment.

3.8 Stimulate Innovation and Growth
The use of green HRM practices in a solar energy firm stimulates the development of innovative, and creative ideas and practices that lead to improvements in quality and efficiency, particularly in an attempt to offset the disadvantage of low solar panel efficiencies, which have a bearing on the high capital costs and sizes of the solar installations.

3.9 Facilitate Learning and Shape Employee Behaviour
Because of green management activities, workers are likely to cultivate a more environmentally conscious mindset which can influence their behaviour in all walks of life.

3.10 Optimising Resource Utilisation
The use of recycled materials and other eco-friendly HRM practices may help a solar energy company get the most out of its natural resources and minimise waste to the absolute minimum.

4. Challenges of Green HRM in the Solar Energy Sector
The numerous advantages which accompany the incorporation of Green HRM in the solar energy sector notwithstanding, certain challenges have to be overcome in the deployment of the green HR practices. The following are some of the challenges:
a. Every solar energy company has on its rolls, staff members who are not equally enthusiastic about implementing green HR practices.
b. It takes time and effort to develop and sustain a green HRM culture in an industry where field work is extensive.
c. In the beginning, usually, it may require a large investment and may not provide a significant return.
d. When it comes to implementing green HRM, it is difficult to find and train the right people in solar projects.
e. Measuring employee behaviour's impact on the environment is a challenging task.
f. Green HRM requires a long-term shift in mindset among employees who are used to standard HR practices.
g. To choose and nurture the next generation of green leaders, HR professionals have a major challenge: building a green structure, using green processes, and providing green tools.

4.1 The Strategic Use of Green HRM
Green HRM may be included into traditional HR responsibilities as a new addition. The following are a few

common HR roles that might benefit from using green HR principles.

4.2 Advertisement and Recruitment over the Internet
Astonishing advancements in technology have made it simpler for companies to publish their job listings on online employment portals and their own sites. Even a candidate's curriculum vitae may now be submitted electronically. This procedure is simple, fast, and low-cost. Only Internet access is required for the applicants. When applying online, the applicant may search and obtain information from the company's Web site, which is not feasible when applying by mail or in person.

4.3 Selection of Applicants Using Environmentally Friendly Methods of Recruitment
Companies may access suitable candidates' resumes and bio-data. As soon as it is completed, they will have unlimited printing capabilities. Selection examinations that can be completed with the least amount of paper include behavioural observation, interview, and presentation. Additionally, employers may provide preference in the recruiting process to candidates who are conscious of environmental concerns.

4.4 Green Orientation
During the induction and process, new workers may be included into the green awareness process. Green workplace behaviour should be emphasised in orientation and training sessions, to highlight the need for environment-friendly behaviour.

4.5 Green Performance Management and Evaluation
Key Performance Indicators should be created as part of an overall performance management system (KPI). At all levels, performance evaluations should focus on green performance objectives and green behaviour indicators. Examples of these aims include promoting employee awareness and accomplishment, and motivating others to observe green practices in the workplace.

4.6 Green Training
Programs, workshops, seminars, sessions, and presentations that assist workers learn about green management practices should be included in the training, learning, and development process. It is essential that environmental management abilities and skills be included into the curriculum. In addition to green management, a wide range of online and web-based training courses and tools are available. A green training programme might focus on topics like safety, energy conservation, trash management, and recycling. To limit the amount of paper used in training, instructors should depend more on Internet resources rather than printed materials.

4.7 Green Compensation and Rewards
Green talents and achievements should be recognized and rewarded in compensation plans. There may be incentives for employees who go above and above to maintain their workplaces clean, satisfy health and safety regulations or decrease paper consumption.

4.8 Maintenance of Employee Relations
Eco-friendliness may be promoted by the firm to increase the value of the company's goods and services by making the most of the company's financial, human, and environmental resources. If you want a workplace that's healthy, productive, and socially responsible, you need to encourage your employees to become involved and participate in social and environmental activities.

4.9 Green Leadership Management
The leadership of green management in an organisation ideally requires a high-level manager to direct and implement the company's green activities. They may include environmental concerns into their commercial and corporate goals.

4.10 Health and Safety Management
Management of health and safety also involves environmental management. In the light of the same, "Health and Safety Manager" which was an earlier designation, is currently being renamed as "Health, Safety, and *Environmental Manager*" in many firms. Unlike the erstwhile designation, the current designation has a broader range of duties. The conservation of biodiversity and community support activities constitute integral and important dimensions of all solar energy firms. A green workplace is the primary goal of green health and safety management. An ecologically friendly, resource-efficient, and socially responsible workplace might be classified as a "Green Workplace." Employee stress and occupational sickness are on the decline, as a positive outcome of these organisations' long-term investments in environmental efforts.

4.11 **Green Employee Discipline Management**
To fulfil their environmental management goals and plans, companies may need green disciplinary management methods to ensure green employee conduct in the workplace. "Discipline management" has been used by certain firms in this context to help workers self-regulate environmental protection initiatives inside the company. According to their environmental policy, these businesses have established a system of rules and regulations that require and govern employee care for the environment. Punitive measures may be initiated against habitual offenders.

5. Discussion

For a solar energy company to be as profitable, socially responsible, effective and efficient as possible, it must utilise its devoted, motivated, and efficient employees to the fullest extent possible. "A collection of diverse but connected activities, functions, and processes that are focused towards recruiting, developing, and maintaining (or disposing of) a firm's human resources" is how HRM is described. As part of an organisation's broader culture and commercial objectives, HRM is often organised into systems. There is a consensus among academics and industrial experts that HRM is the most successful method for enhancing an organisation's performance and gaining a competitive advantage. Environmental management systems (EMS), are becoming more popular as a means of gaining a strategic advantage over the competition. This system's organisational structure allows businesses to better regulate their environmental impacts. Measurement and evaluation are key components of an environmental management system. This system contains all the above.

Corporate environmentalism or green management is a strategic problem that evolved in the 1990s and became a popular and highly relevant issue of worldwide concern in the 2000s. Global businesses, particularly in the emerging solar energy sector, are increasingly concerned about this problem. A significant scope for implementation of best practices in environmental management exists today among solar energy firms, in particular, which are intrinsically linked to both society and the environment. In the past, they have been responsible for the largest share of global carbon emissions. Environmental degradation may be lessened by lowering the use of limited natural resources via the development of biotech products and exploration of fossil fuel alternatives. To reduce the negative effects of environmental degradation, businesses should devote more resources to research on new technologies, such as the development of nontoxic and pollution-free goods. Environment friendly and green management practices may have a positive impact on employee productivity. Green HR practices also enable the development of environmentally aware teams of committed employees, who become major assets for solar energy firms faced with a constant need for dedicated staff, given the rapid rise of the solar industrial sector across the globe.

6. Conclusion

It may be concluded that a solar energy firm may enhance its social and organisational performance in a sustainable way by using green HR practises, based on this study and findings of research literature on green HR. Ranking among the best practises to date, green HRM will generate certain competitive advantages for the firm, besides enhancing its market position. For the benefit of society as a whole as well as the whole planet, environmental friendly practises will soon be required of almost all businesses. Hence, it is suggested that businesses should include environmental sensitivities and practises into every important policy and activity, particularly in the solar energy sector, for sustainable development of the world.

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