



The Green Seal Guidelines – A Best Practices Guide



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Hollywood Is a Critical Agent for Change

Hollywood is routinely considered a first mover in terms of recognizing and highlighting topics of importance and working towards social change. Because of its vast global influence, Hollywood has an unmatched ability to shape attitudes and beliefs and ultimately bring about individual and social change.

The film and television industry has the incredible opportunity to not only focus its messaging on environmental issues but to show first-hand that changes favoring ecology and sustainability are necessary, beneficial and, most importantly, feasible.

With this opportunity follows a commitment and a dedication to not only highlight environmental concerns, but also to tackle them head on. Now is the industry's chance to take the initiative and effect change by looking within itself at its own production processes and actively working to reduce consumption, waste, and emissions of greenhouse gases.

How EMA Can Help

EMA, through its “Green Production/Green Seal” program, seeks to establish a common standard of what a “Green Production” entails and to recognize environmental leadership within the motion picture and television industry.

While certain aspects of greening a film or television production require very little effort and forethought, some initiatives necessarily involve effective planning and decision-making. The “Green Production / Green Seal” program will act as a resource for reliable and relevant information and resources, and EMA will act in an advisory role to help lessen the impact of the production.

EMA will be there every step of the way, with personalized, on-location assistance if necessary. Through mindful planning and execution, the environmental footprint of a production can be considerably reduced and Hollywood can continue its tradition as a catalyst for social change.



The Green Seal Guidelines

These Guidelines for planning and executing a production are divided into eight sections, covering the following areas: Getting Started, Energy Generation, Material & Sets, Waste Disposal, Transportation, Office Operations, Food & Catering, and Filming and Post-Production.

The ultimate goal of this Guide is to reduce consumption of resources. Whether one or all of the sections of this Guide are implemented, a production's “Green” focus should be to **always reduce first**. These Guidelines offer suggestions and solutions for reducing total energy consumed, number of miles traveled and waste generated, among other things.

Beginning the “Green Production” process can seem overwhelming but the most important action is simply to start. Further lessening a production's environmental impact can grow and build as your time and resources allow.

In order to successfully make a production environmentally sustainable, it is necessary for one to first set goals and objectives that can be achieved. This process requires an analysis of the production process and a determination of which steps would achieve best results.

Setting Goals and Objectives

- Such an analysis inevitably leads to specific questions which will help to shape the initiatives chosen as well as frame the overall environmental focus during the production. Such questions include:
 - Are there any issues that are relevant and/or are of specific importance to the production?
For example, is the priority to cut down on emissions? Or is it to reduce the overall amount of waste? The answers to these questions provide a focus on where and how to spend time and resources during the planning stages.
 - How much can be budgeted towards environmental initiatives?
Is there any sort of financial commitment to support the implementation of green production practices? While many practices should result in cost savings for a production, some may have an initial cost premium that must be covered. The creation of a budget allows for effective plan development and adjustment, if necessary.
 - Are there any logistical constraints to successful implementation?
If there are logistical constraints to any objectives, then alternative methods must be devised. For instance, if reduction of waste is important, but the production requires numerous sets, what other steps can be introduced to achieve green objectives?
 - Which steps have the greatest benefit?
It is sometimes difficult to know which actions have the greatest or most dramatic benefits for the environment. The following section outlines some of the easiest actions that can be taken during a production to effectively save energy, fuel and money, as well as promote conservation of resources.

Immediate Steps

- Recycle/Reuse/Donate
One of the main sources of waste in film and television production comes from set materials. By planning ahead for proper disposal of such materials, a production can divert vast amounts of resources from landfills and provide a second life to many existing resources.
- Biodiesel Generators
Generators that run on biodiesel can produce up to 60% less emissions than those on normal diesel fuel, often at little or no added cost.
- Renewable Energy
The use of renewable energy, e.g. solar, wind, hydroelectric, biomass and geothermal power, on studio lots drastically reduces greenhouse gas emissions while supporting clean alternatives within the energy industry.
- Appoint an Environmental Assistant
Assign a “green” PA to the line producer, who can take responsibility to ensure that lights and electronics are turned off, that recycling is taking place, and that trailer generators are not in use when they are vacant.
- Reduce Unnecessary Travel
Telecommuting, email, Skype, phone, and instant messenger are all effective and practical methods of reducing travel miles while staying in contact.

Creating an Environmental Action Plan

Once there is a commitment to implement a “Green Production,” a plan must be developed and put into place. Based on this plan, all involved in the production process can work towards green production goals. Plans should be created for (1) energy sourcing; (2) materials sourcing and waste; and (3) transportation. If possible, these plans will include timetables, sourcing information, and possible alternatives, if the original plan faces unforeseen difficulties.

Although planning for a green production may seem foreign, even overwhelming at times, the overall production process does not have to change. Instead, the scope of the process is simply expanded to account for environmental objectives. See Appendix A for questions and issues to consider when creating an environmental action plan for a “Green Production.”

Communicating Objectives of the Environmental Action Plan

Expectations for greening the production process should be clearly communicated to all involved, especially if the policies and practices are new. This communication begins with the producer, who has the ability to highlight environmental concerns in initial meetings. The department heads also must let everyone below know which policies are being implemented, why they are important, and what steps will be taken to achieve all stated goals.

Ultimately, responsibility for this communication carries down to all others on the shoot.

If possible, the 1st A.D., production manager, line producer, production coordinator, and construction manager(s) should all be providing consistent messaging to the crew. The clearer the messaging, and the more it is highlighted, the quicker that others will accept and understand the program and its goals.



OVERVIEW

Electrical power is generated either onsite via diesel generators or through a local utility's power plant. Depending on the location and facility, a production might be using both types of power. Typically, buildings and fixed structures are wired for utility-based power while trailers and temporary structures often are paired with onsite generators fueled by standard diesel. Both types of electrical power can be changed to renewable or "greener" energy through a few quick and simple steps.

Onsite (Auxiliary) Power Generation

The use of alternative fuel generators is most beneficial. Eventually, fuel-cell generators will be available that produce zero emissions but until the technology becomes commercially viable, the best option is to use biodiesel.

Biodiesel contains no petroleum and is simple to use, biodegradable, non-toxic, and essentially free of sulfur and aromatics. Most generators can operate on a blend of at least 20% biodiesel fuel. Note that biodiesel is named by the percentage of biodiesel in a diesel blend. For example, B20 means 20% consists of the renewable fuel created from biodiesel; the remainder is regular diesel fuel. Biodiesel can reduce emissions by up to 60% depending on the blend used.

A new generation of solar power generators are now available. The solar panels charge banks of batteries which then provide auxiliary power. They are currently only sized up to 20kW but are 100% emission free.

Utility Power Generation

Electricity on the grid has two components – the electricity itself and the method of generating the power. "Credits" have been created for power generated from renewable sources and these "credits" can be purchased separately from electricity.

TIPS & SOLUTIONS -

- Should auxiliary power be required, first talk to the state and/or local authorities about the possibility of dropping a line (grid tie-in) from the existing electricity grid.

Generators - Size and Reduction of Use

- If onsite generators are required, try to calculate the "right size" load rather than oversize your generator needs to cover every possible contingency.
- Reduce overall generation operation. Set up within the hour of shooting and shut down the gen-set during lunch or other breaks of greater than 30 minutes.

Generators – Type of Power/Fuel

- Make enquiries into the rental of alternative fuel generators. While other considerations must be taken into account, the following power sources are listed by environmental benefit:
 - Solar powered generators
 - Natural gas generators
 - Biodiesel

Utility Power

- If utility-based power exists, contact the utility and sign up for their green power program.
 - If no green power program exists through your utility or if the program is prohibitively expensive, a secondary market exists to purchase renewable energy credits (RECs).

OVERVIEW

More and more studios are saving and reusing set materials, set walls and costuming after a production, ultimately saving money on the purchase of raw materials and construction costs. Productions literally use tons of materials and much of it goes to waste. Environmental responsibility in terms of materials is achieved through two channels – demanding sustainable products from suppliers and conserving/recycling the material that is used.

TIPS & SOLUTIONS -

General

- Make sure nothing is made with PVC (polyvinyl chloride or “vinyl”).
- Wherever possible, use recycled materials and/or environmentally friendly labels.
 - If this is not possible, make every effort to use sustainable/“green” materials, such as bamboo, homastote, non-PVC materials, natural textiles, and reclaimed materials. Practical examples include cork flooring, homastote walls, sisal area rugs, and salvaged wood.
- Rent rather than buy. Wherever a prop or structure can be rented and reused instead of built or purchased, it is the best option.
 - If filming on a lot, check with the studio to determine if certain set props and materials can be rented, such as furniture and computers.
 - Ask for rented props made from sustainable wood and materials. Even if the rental company does not have sustainable rental pieces, each new customer demanding it will help change business practices.
- If the material has to be purchased and constructed, “design for disassembly,” i.e. all stage and infrastructure should be designed and constructed to facilitate easy deconstruction. This is covered in more detail in the “Waste Disposal” section.
- Make efforts to source products locally, decreasing harmful emissions from airlines and trucks.
 - Trucks will have to transport materials and products even from local sources so, if possible, ask that all deliveries be made with biodiesel trucks.
- If paint removal is required, use plant-based paint strippers.
- If adhesives are needed, make sure they are low-VOC.
- Avoid toxic materials.
 - Certain building materials should be avoided to the greatest extent possible, including PVC, arsenic or chromium-containing preservative-treated wood, and materials containing phthalate plasticizers or brominated-flame retardants.
- Dispose of paints and other hazardous materials in a responsible manner to keep them out of storm drains.

TIPS & SOLUTIONS -

- Create a list of all materials and items needed for the production and identify any materials that can be sourced in an environmentally-friendly fashion. A quick list of such materials includes:

Wood

- Make sure wood is Forest Stewardship Certified (FSC) or other certified sustainably harvested source
- Make every effort to avoid the use of tropical hardwoods such as lauan.

Paint

- Use low-VOC (volatile organic compounds - chemical compounds that harm the environment and humans) and water-based paint to minimize toxic emissions.
- Water-soluble latex paints typically contain fewer VOCs, generate fewer odors, and eliminate the need to use paint thinners to clean surfaces.

Wardrobe

- Wherever possible, purchase second-hand or recycled clothing and accessories.
- Support designers, who use environmental materials or who have environmental credentials.
- Repair and alter garments rather than buying new pieces.
- Avoid clothes requiring dry cleaning. If dry cleaning is necessary, support those dry cleaners that do not use perchloroethylene (PERC).
- Wherever possible, use cold-water cycles for washing costumes to reduce the overall energy required.
- Re-use coat hangers and plastic garment covers.
- Store and recycle costumes when possible.

Make-up and Hair

- Favor hair, cosmetic and personal care brands that use less packaging and/or recycled packaging.
- Select hair, cosmetic and personal care brands committed to avoiding animal testing.
- Investigate organic alternatives for hair, cosmetic and personal care products.
- Recycle all packaging, where possible, and use refills to avoid disposing of non-recyclable containers.
- Maintain recycle bins in make-up and hair staff locations.
- If possible, purchase products in bulk to avoid unnecessary travel.

OVERVIEW

Depending on the location and type of materials, there are numerous organizations and companies that are devoted to assisting the film industry in diverting waste through donation and reuse of waste materials. These range from non-profits that accept donations of materials, goods, and props to companies that specialize in deconstruction of materials and/or the recycling, resale, or donation of raw materials. Such organizations help to reduce overall amounts of waste created and provide much-needed materials to other groups and non-profits.

Various non-profit organizations will accept donations of furniture, clean lumber, large pieces of carpeting, doors, appliances, and windows, among other materials. Not only will donation of such materials ensure their diversion from landfills, but it also provides cheap materials to other organizations for good use.

If the materials and set pieces are from a production on the lot and cannot be donated, look to the in-house reuse program. Set walls, as well as specific props and materials, can be kept for reuse in other productions. This will also reduce the total amount of waste and the subsequent cost of such disposal.



TIPS & SOLUTIONS -

- Develop an implement a construction waste management plan that identifies materials that can be diverted from the landfill.
 - Establish percentage goals for the amount of waste to be diverted.

- Ensure that construction of sets have been “designed for disassembly,” i.e. all stage and infrastructure should be designed and constructed to facilitate easy deconstruction.
 - This might include (a) designing to standard dimensions of the material (e.g. 4’ x 8’) so that sheet goods can be salvaged full-size (no cutting); (b) using screws and bolts for fabrication as opposed to adhesives and nail guns; and (c) engaging a deconstruction contractor at the outset to prepare for dismantling and recycling/donating.

- Contact organizations to inquire about selling or donating set materials and props. Often, pick-up and delivery will be provided by the organization, but it will always have to be prearranged.
 - If donating, give organizations a list of possible donation items before the end of production. This gives them enough time to make appropriate contacts and work to locate recipients.
 - Look into donation programs at local theaters, middle/high schools or acting schools.
 - Support charities that are willing to pick up, recycle or re-use materials.

- For all materials that cannot be donated or reused, call organizations that focus on deconstruction and diversion from landfills and set up an appointment for a consultation.

- Determine the extent of recycling capabilities at the film location.
 - If filming on the studio lot, contact the city’s environmental or waste departments and order enough recycling bins to place alongside each garbage can.
 - If filming on location, determine which recycling company should be contacted through the local municipality website.
 - Ask your waste disposal company to monitor and provide metrics on the amount of waste going to the landfill.

- See EMA website for organizations and/or resources involved in recycling, donating and/or deconstructing set materials.
 - The services provided by these organizations vary in price, logistical constraints, and commitment on the part of the production crew.

OVERVIEW

On certain productions, the need to travel to distinct locations or transport necessary materials is a requirement that often cannot be avoided. However, it is important to remember that travel places a tremendous burden on the environment by polluting the air with particulate matter and increasing levels of greenhouse gases. Although travel is inevitable and it is virtually impossible to completely eliminate the resulting pollution, cutting out unnecessary travel can reduce a production's environmental impact and save time and money.

A good deal of money is wasted on unnecessary travel expenditures. Set up a travel approval process that focuses on determining whether travel is absolutely necessary for a specific production.

If meetings can be held by conference call and/or video conference, this will not only prevent vast amounts of CO2 emissions but will also save money. Companies around the world are beginning to use new conferencing technologies and saving tens of thousands of dollars on travel reductions.

TIPS & SOLUTIONS -

- Create a list of all transportation needs during the production of the film, including those of all staff, crew, talent, and any contractors - this list will form the basis for decision-making on "greening" a production's travel needs.
- Keep track of all fuel consumption, miles driven, and miles flown.
- Wherever possible, replace travel to a meeting with video or conference calls.
- If multiple people are traveling to the same location, determine whether it is possible to travel in groups, e.g. on the same flight and/or carpooling in the same vehicle.
 - If it is feasible to do so, provide incentives to the crew to encourage carpooling.
- Hire environmentally friendlier transport.
 - For air travel, use commercial air liners rather than private planes.
 - For ground travel, seek eco-friendly car services from rental car companies and/or limo services that use hybrid or alternative fuel vehicles.
- Practice efficient driving techniques and avoid idling motors.
 - Strictly enforce a "no idling" policy during the production.

OVERVIEW

Individual office supplies are relatively inexpensive when purchased singularly, but in bulk, the costs add up. During a typical production, untold amounts of paper are tossed into the garbage. Small changes in habits and procedures can reduce waste, as well as certain office costs, by up to 50 percent.

Taking steps to reduce consumption of resources and materials will save money. For example, use less paper by printing double-sided; send messages via e-mail rather than hiring a courier; use rechargeable batteries; rent computers and other electronic supplies, rather than purchasing them. These steps are healthier for the environment and ultimately cost less.

TIPS & SOLUTIONS -

General

- Create and inform staff of office-wide plan focused on: (1) energy conservation; (2) materials conservation; and (3) waste management and recycling program.
- Summarize your office and purchasing needs upfront.
 - Determine what can be eliminated or replaced by technology. **Where can the production reduce paper consumption?**
- Where absolutely necessary, purchase environmentally responsible products.
- Look for or ask your supplier about the following product criteria:
 - **Paper and basic office products:** Are they produced from recycled content? If so, what percentage? Is paper unbleached?
 - **Electronics:** Do they meet Energy Star standards? Can I rent and return machines for continued use?
 - **Cleaners:** Are cleaning supplies non-toxic? Are all lights and heating/cooling systems turned off at the end of each day?
 - **General:** Is it a carbon neutral product? Is it an otherwise “green” product?
- Challenge your employees to create solutions and ideas to reduce the amount of waste that is created.
- In the office and on the set, leadership is paramount.
 - Directors and actors will help by committing to recycling and reducing their waste.

TIPS & SOLUTIONS -

Reduce Energy Consumption:

- If possible, keep track of the energy consumption of the office.
- For larger supplies such as electronics (i.e. computers and peripherals), all short-term productions should rent machines instead of purchasing them outright.
 - Rental companies refurbish and maintain machinery to maximize lifetime and performance and many refurbished machines come with a warranty.
- Whether purchasing or renting office electronics, ensure they are Energy Star certified.
- Completely turn off all electronic devices when not in use – standby still consumes electricity.
 - Disable screensavers.
 - Unplug chargers for mobile phones, Blackberrys, iPods and other electronic devices when not in use.
- Use laptops rather than desktop computers.
- Wherever possible, change incandescent light bulbs to CFLs or LEDs.
 - Make use of natural daylight as much as possible.
 - Install dimmers or occupancy sensor switches in common, low use areas, such as conference rooms, kitchens and restrooms.
 - Use task lighting to light work areas.

Reduce Materials Consumption:

- To the best of ability, track paper consumption throughout the office
- Save paper by sending messages electronically, rather than using a courier, and printing documents double-sided.
- Use rechargeable batteries.
- Use remanufactured ink cartridges.

TIPS & SOLUTIONS -

Reduce Waste:

- Make every effort to track waste created and diverted. Ask the waste management company for monthly metrics.
- Setup recycling bins and recycling signs across the lot and in all offices.
 - Ensure recycling bins are set up next to trash bins and make sure the bins and signs for recycling are apparent.
 - Notify all staff about the existence of recycling bins, educate them on what is recyclable, and communicate recycling expectations.
- Recycle all used ink cartridges.
- Replace disposable goods with reusable alternatives.
- Support products with recycled and/or recyclable content over those made with virgin materials.
- Promote and encourage reusable drinking bottles and mugs. Take steps to minimize the use of bottled water.
- Ask suppliers to take back packaging for large items such as computers and furniture.
- Dispose of used batteries properly.
- Compost, if possible.

OVERVIEW

Catering and craft services generally use a large number of recyclable cardboard boxes, pallets, and other packaging materials. Despite the fact that a majority of these materials can be reused and/or recycled, most are simply thrown into the garbage. It is inevitable that both catering and craft services are going to produce a good deal of waste but most of it does not have to end up in landfills.

Also, a focus on environmentally healthy food products has become more of an issue. The use of locally grown, organic food is on the rise and ultimately helps to reduce carbon emissions from transportation of goods, minimize the use of toxic pesticides and support small, local farmers.

TIPS & SOLUTIONS -

- Talk to craft services/catering and make them aware of your desire to recycle the proper materials – help them understand exactly why and how you are incorporating recycling into the production.
 - Provide them with clear-cut examples of the sort of materials and/or product packaging that you want to see recycled.
 - Make it clear that anything made of cardboard should be recycled.
 - Ask them to reduce the amount of packing materials used when food is delivered.
- Provide recycling bins next to each waste bin.
 - Ensure that all recycling bins are properly and conspicuously labeled so that everyone stays aware and informed – include bins for plastic, cans, glass, paper and metals.
 - Place recycling bins next to every trash can, especially near craft service and/or catering stations, to ensure that recycling is as easy as possible for all involved.
- If take-out is ordered, request that the restaurant not use Styrofoam packaging.
- Encourage the use of reusable cutlery, plates and cups rather than disposable items.
 - To discourage the consumption of disposable paper cups, support the use of personal travel mugs.
- Apply fair trade principles when selecting imported food products (e.g. teas, coffees, fruits and vegetables).
- Make use of lunch/gathering locations to educate and inform cast and crew of environmentally-friendly practices.
- Compost, if possible.

OVERVIEW

Environmental concerns for post-production are similar to those in any office environment. Steps should be taken to reduce energy consumption, amount of materials used, and waste produced. Any steps that can be taken to reduce consumption of resources and materials will save money. The simplest way to realize energy savings: **turn off electronics when not in use.**

TIPS & SOLUTIONS -

Reduce Energy Consumption:

- Ensure that all computers have their screen saver modes turned off and the hibernation/sleep mode enabled.
- Any electronics that do not require a continuous flow of electricity should be turned off completely or unplugged – not just put in standby – when not in use.
- Wherever possible, ask for energy efficient or environmentally responsible technical and studio sound recording equipment. While there are not a vast amount of materials on the market, if enough inquiries are made, suppliers will begin to get the message.
- Where possible, rent or purchase energy efficient equipment (e.g. Energy Star).
- Use dimmers to rest lights between setups rather than turning lights on and off.

Reduce the Use of Materials:

- Reduce the use of paper by using email, IM and text instead of printing or, if necessary, printing double-sided.
- The ability to use digital processing and electronic transfer of sound and images helps to reduce the use of tape and film.
- Recycle color gels for use in future productions. If possible, invest in colored glass/dichroic filters, which have a longer lifetime than gels.

Reduce Waste:

- Make every effort to recycle all possible materials.
- Print double-sided and use email, IM, and text rather than printing.
- When possible, distribute projects and demo reels on DVD with minimal packaging materials.
- Recycle waste film rather than sending it to landfills.
- For electronics, all short-term productions should rent machines instead of purchasing them outright. Rental companies refurbish and maintain machinery to maximize its lifetime and performance and many of these machines come with a warranty.

OVERVIEW

This checklist was created as a guideline for you to fill out in the formation of your environmental action plan. It may also raise issues that otherwise may be overlooked in the planning process.

PLANNING CHECKLIST -

Initial Planning

- Who are the people responsible for creating and implementing the environmental action plan?
- How many people will be working on the site?
- Does the production or production company have an environmental policy currently in effect?
If so, what are the main points of emphasis?
- If there is a current environmental policy, are there procedures currently in place?
- What major environmental impacts might potentially occur as a result of the production (travel, energy consumption, waste, paper usage)?
- What are the main services that are contracted for within the production?
Can sustainable/environmental principles be included in the contract stipulations?
- What are the major items consumed in terms of cost? Of volume?
- Based upon best estimates, what types of waste will be created?
What will be the main sources of waste?
- What are the parking arrangements for the cast and crew?
- What types of facilities and/or amenities are provided for the cast and crew?
- Is there a campaign in place to educate cast and crew on the environmental action plan and policies?

PLANNING CHECKLIST:

Energy Generation & Efficiency

- How is electricity generated? If sourced from a utility, which one?
- If auxiliary power is going to be used, is it feasible to use a biodiesel fuel?
- Where is most of the energy going to be consumed? Is there a way to reduce that consumption?
- Are any energy efficient policies or programs currently in place within the studio/office/set?

Resources & Waste

- What are the main sources of waste?
- Are there bins for collecting waste? How many? Where are they located?
- Are there bins for collecting recyclable materials? How many? Where are they located?
- Are there facilities for collecting organic waste for composting?
- What types of materials are used on the sets?
- What will happen with the set/set materials once filming has wrapped, i.e. will the sets be donated or reused?
- Have you talked with your disposal company about collecting waste metric data?



PLANNING CHECKLIST:

Transportation

- How many vehicles on average will be used each day?
- What are the types of vehicles being used?
- Is it possible to utilize other forms of transport, such as mass transit, bicycle, etc.?
- Is it possible to set up a carpooling system/schedule for crew members?
- Is it possible to reduce travel miles through the use of technologies, such as instant messenger, email, video conference, etc.?



Catering

- How many people are being catered for?
- Do the ingredients used by the catering company come from local sources?
- Are the plates, cups and cutlery reusable?
- What disposable items were used?