



# 2010 CORPORATE SUSTAINABILITY REPORT

ADRIAN SMITH + GORDON GILL  
ARCHITECTURE

pollution. Take action against glo



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# ADRIAN SMITH + GORDON GILL ARCHITECTURE

Date 2011.02.01

We would like to start by welcoming you to our Corporate Sustainability Report (CSR) for 2010. This is the first time that we have published such a report and we are committed to continuing it annually and to improving its content, look and feel each year.

“Corporate” is not how we would describe ourselves but we fully support the intent of a “CSR,” which encourages any business to become aware of, and most importantly accountable for, their actions, and disseminates the lessons learned across various industries. We want every year to build upon the lessons learned from the previous year, thereby creating a knowledge base relevant to all.

Responsibility, efficiency and accountability: these are strong words that we use repeatedly with our staff and clients to guide our work. We take our role as thought leaders and innovators seriously, and offer this report as an indicator of our commitment to sustainability – not just in the way we approach building and community design but also in the way that we go about our day-to-day business.

We formed the firm in 2006 based on a commitment to sustainable design. We believe that purposeful performative design has to be a firm-wide philosophy and require that every person who comes to work for us, or with us as consultants, is committed to these ideals.

This first report is not perfect. It is not an exact science, but allows us to create a benchmark that we can improve against in the future. This is the goal: to improve, and to make a conscious effort that permeates the ethos of the firm and becomes second nature.

Submitting the CSR to the Global Reporting Initiative also associates us with global organizations committed to the same aims. This allows us to compare our performance with that of others and together build a global body of knowledge around best practices and the business community’s impact on the environment that we all share.

We believe in the power of design to effect change and the responsibility to do so in a sustainable manner. We design millions of square feet of space for clients around the world, improving their practice in a sustainable manner, and we need to make sure that our firm operates in a similar way.

Publishing this report is a step toward ensuring that we meet this objective.

On behalf of Adrian, Gordon and myself, we welcome any thought or comments that readers may have.

Regards,

Robert Forest  
AIA, OAA, RIBA, LEED AP  
Partner







# OUR APPROACH TO SUSTAINABILITY

Sustainability is perhaps one of the most over used words of the modern age, meaning different things to different people. As a leading design firm, we are not interested in debating definitions, but would rather focus on principles and actions. We are in a unique position that enables us to address many of the core concepts that are widely associated with sustainability. We have the opportunity to design buildings and communities that directly tackle issues such as global warming, environmental degradation, urbanization, air quality and pollution. We can influence the supply chain to provide products that require fewer resources to manufacture, generate less waste and are more economical to purchase, operate and maintain. We can design buildings that have lower life cycle costs than similar buildings of comparable size. We can design buildings, districts and cities that have all the conditions necessary to develop into functional communities where people of all income levels can live happy, fulfilling lives.

Besides the results of our work, sustainability is a mantra that we apply to the way that we go about our business and our daily lives. Whether this is segregation of recyclable waste in the office or supporting tax incentive schemes for employees to use public transport, we instill these values in our staff and are constantly looking for new opportunities to improve.







# TO GUIDE US, WE HAVE DEVELOPED A SERIES OF SUSTAINABILITY PRINCIPLES THAT WE CONSIDER IN OUR OFFICE PRACTICE AND THROUGHOUT THE DESIGN PROCESS

1. Explore with clients innovative strategies for improving their triple bottom line and exceeding their goals and expectations
2. Strive to develop and implement new approaches toward design that work with the natural environment and decrease buildings' environmental impact
3. Incorporate philosophies such as re-thinking waste and improved integration of existing technologies to deliver low-cost, high-performance buildings
4. Monitor, report and share with the architectural community at large our designs' energy consumption to hold ourselves accountable and help raise our profession's awareness and actions
5. Encourage and promote the professional and personal development of our employees through constant learning and educational opportunities
6. Promote a work environment that fosters diversity of cultures, experiences and knowledge which encourages collaboration and growth
7. Reduce fossil fuel consumption, water consumption and waste generation through sustainable business practices
8. Monitor and report our resource and energy consumption to hold ourselves accountable and promote a decrease in our own consumption
9. Increase employee awareness of issues pertaining to sustainability and implement initiatives to address them
10. Encourage community involvement to further develop a positive relationship with the communities in which we live and work







# PART ONE

## WHO WE ARE

Adrian Smith + Gordon Gill Architecture was founded in 2006 by partners Adrian Smith, Gordon Gill and Robert Forest. Headquartered in Chicago, Illinois, the firm specializes in architecture, urban planning, interior design and sustainable design. We also have offices in Beijing and Dubai. AS+GG's architects have expertise in a range of building types, including supertall towers, large-scale mixed-use complexes, corporate offices, exhibition facilities, cultural facilities and museums, civic and public spaces, hotels and residential complexes, institutional projects and high-tech laboratory facilities.

AS+GG uses an integrated, performative design approach that emphasizes a symbiotic relationship with the environment. We strive to seek out projects that are focused on sustainable issues that can become a part of a larger global effort of sustainability. We are not limited by new building projects; included in our sustainable approach are the retrofitting and rejuvenation of existing building projects.



## PARTNERS



Adrian Smith has been a practicing architect for over 40 years. His extraordinary body of work includes some of the world's most recognizable landmark structures. Adrian looks at each project holistically, considering site orientation, climate and geography, cultural and social influences to create highly sustainable projects that achieve contextualism within the global environment. As one of the world's foremost exponents of supertall towers, he has long worked to integrate energy-efficient systems into his designs.



Gordon Gill has designed award-winning architecture across the globe. His work emphasizes a holistic approach to design that integrates all project disciplines. The results are performance-based designs that work symbiotically with their natural surroundings, contributing to the sustainability of cities and creating an optimal user experience. These projects exemplify Gordon's philosophy that architecture must strike a balance with its global environmental context.

# LEADERSHIP



Robert Forest has extensive knowledge and experience with the execution of projects on an international scale. His expertise in project management and technical architecture contribute to his comprehensive understanding of the practice of architecture. A recognized authority on the economics of sustainable design, he has combined his knowledge of local and international policies, funding sources and varied economic models to develop a system of best practices for managing high-performance projects.

## SENIOR TEAM

### OFFICER

Kathy Fanning Chief Financial Officer/Cheif Operating Officer

### DESIGN

Les Ventsch Director of Design

### TECHNICAL

Sae Oh Director  
Jorge Soler Director of Technical Design  
Peter Weismantle Director of Supertall Building Technology

### MANAGEMENT

Brian Jack Director  
Jon Orlove Director of Project Management

### URBAN DESIGN

Peter Kindel Director of Urban Design

### SUSTAINABILITY

Christopher Drew, Phd. Director of Sustainability

### INTERIOR DESIGN

John Burcher Director of Interior Design

### ASIA

Weiwei Luo Director of Chinese Operations

### COMMUNICATIONS

Carrie Neill Director of Communications  
Kevin Nance Director of Public Affairs

### INFORMATION TECHNOLOGY

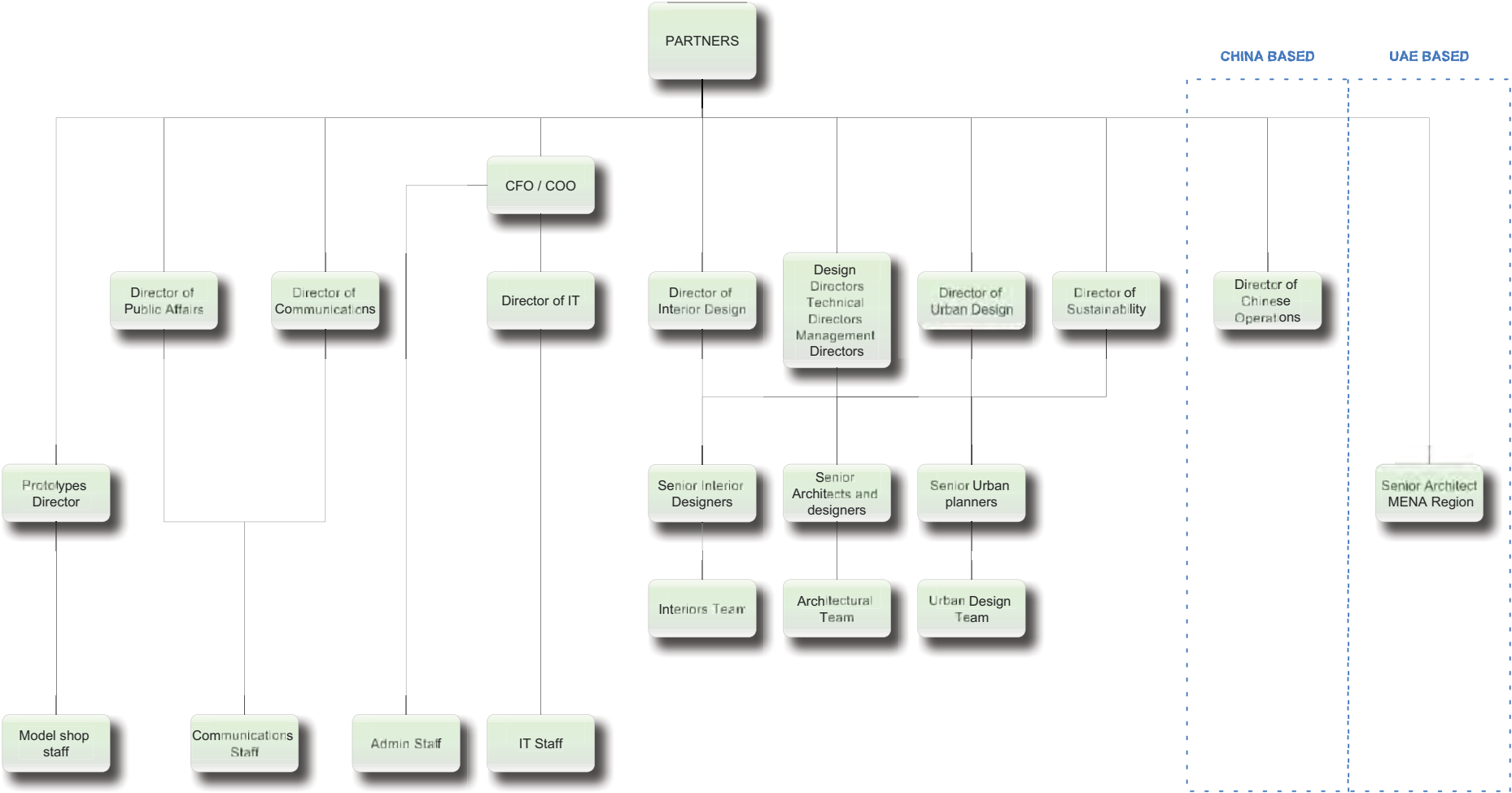
Dean Mueller Director of IT

### PROTOTYPE/MODEL SHOP

Brendan Gibbons Prototypes Director



# OFFICE ORGANIZATION





We value the fact that our staff comes from a diverse mix of geographic origins and cultural backgrounds. In total, our staff members were born in, have lived in or are nationals of 24 different countries. This allows us to bring a global perspective to our projects and this knowledge of cultural, religious, aesthetic, socioeconomic and technical differences enables us to thrive in an international setting. The following table shows the countries in which AS+GG staff has lived for a significant period of time.

WHERE WE'VE LIVED AND WORKED

Africa: 1% / Asia: 16% / Europe: 12% / North America: 100% / South + Central America: 10%

Argentina / Canada / China / Colombia / Cuba / Egypt / Germany / Guyana / Hong Kong / India / Ireland / Jamaica / Japan / Lebanon / Mexico / Norway / Poland / Romania / South Korea / Spain / Taiwan / United Arab Emirates / United Kingdom / United States





Adrian Smith and Gordon Gill collaborate on Masdar Headquarters

The firm focuses on the design of high-performance, energy-efficient and sustainable architecture on an international scale. The practice includes designers with extensive experience in multiple disciplines, including technical architecture, interior design, urban planning and sustainable design. Architects also have expertise in a range of building types, including supertall towers, large-scale mixed-use complexes, corporate offices, exhibition facilities, cultural facilities and museums, civic and public spaces, hotels and residential complexes, institutional projects and high-tech laboratory facilities.

## AS+GG SERVICES:

### ARCHITECTURE

Civic	Institutional
Commercial	Mixed Use
Cultural	Residential
Hospitality	Supertall

### URBAN DESIGN

City Planning  
Infrastructure Design  
Landscape Design

### INTERIOR DESIGN

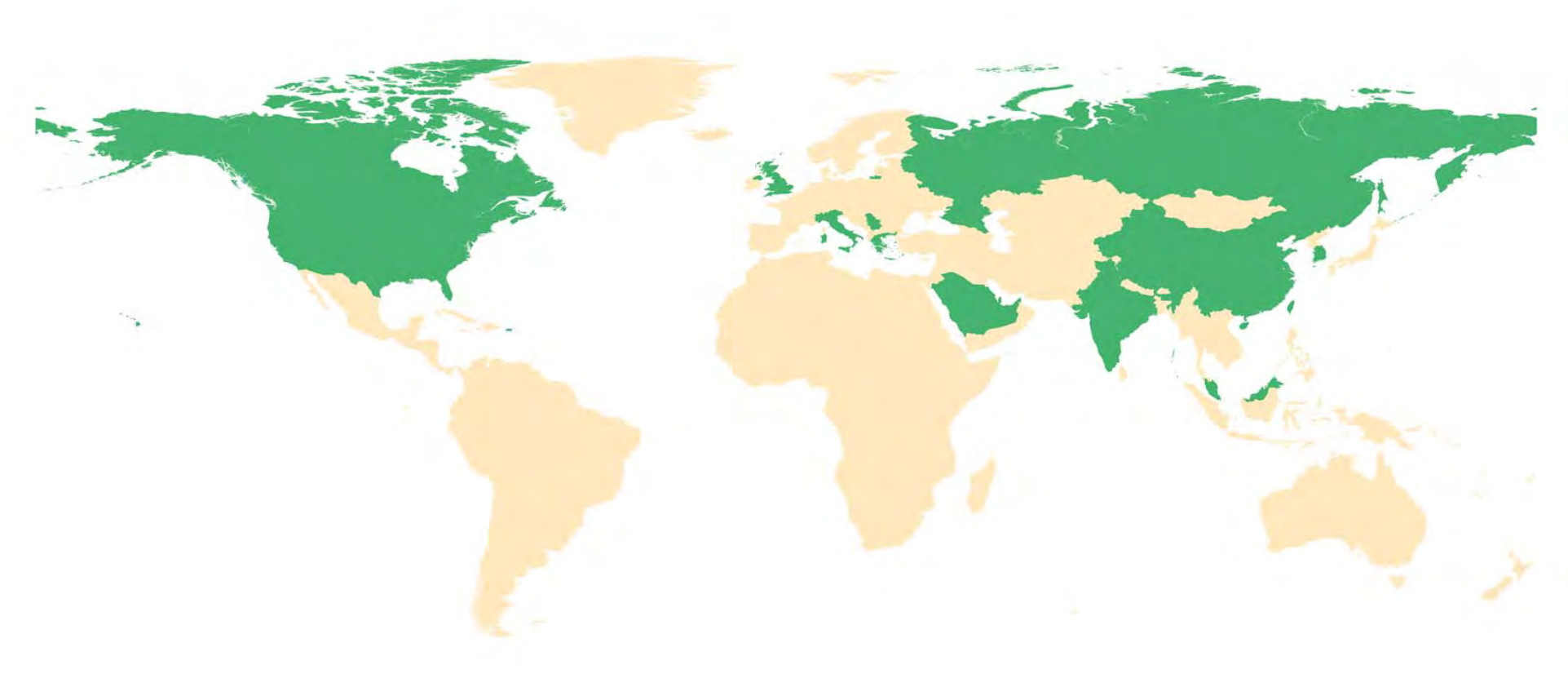
Interior Design  
Furniture Design

### SUSTAINABLE DESIGN

### PRODUCT DESIGN

## 2010 PROJECTS

Civic: 1  
Commercial: 5  
Cultural: 1  
Hospitality: 2  
Institutional: 1  
Mixed Use: 3  
Residential: 6  
Supertall: 4  
Urban Design: 4  
Interior Design: 5  
Sustainable Design: 13

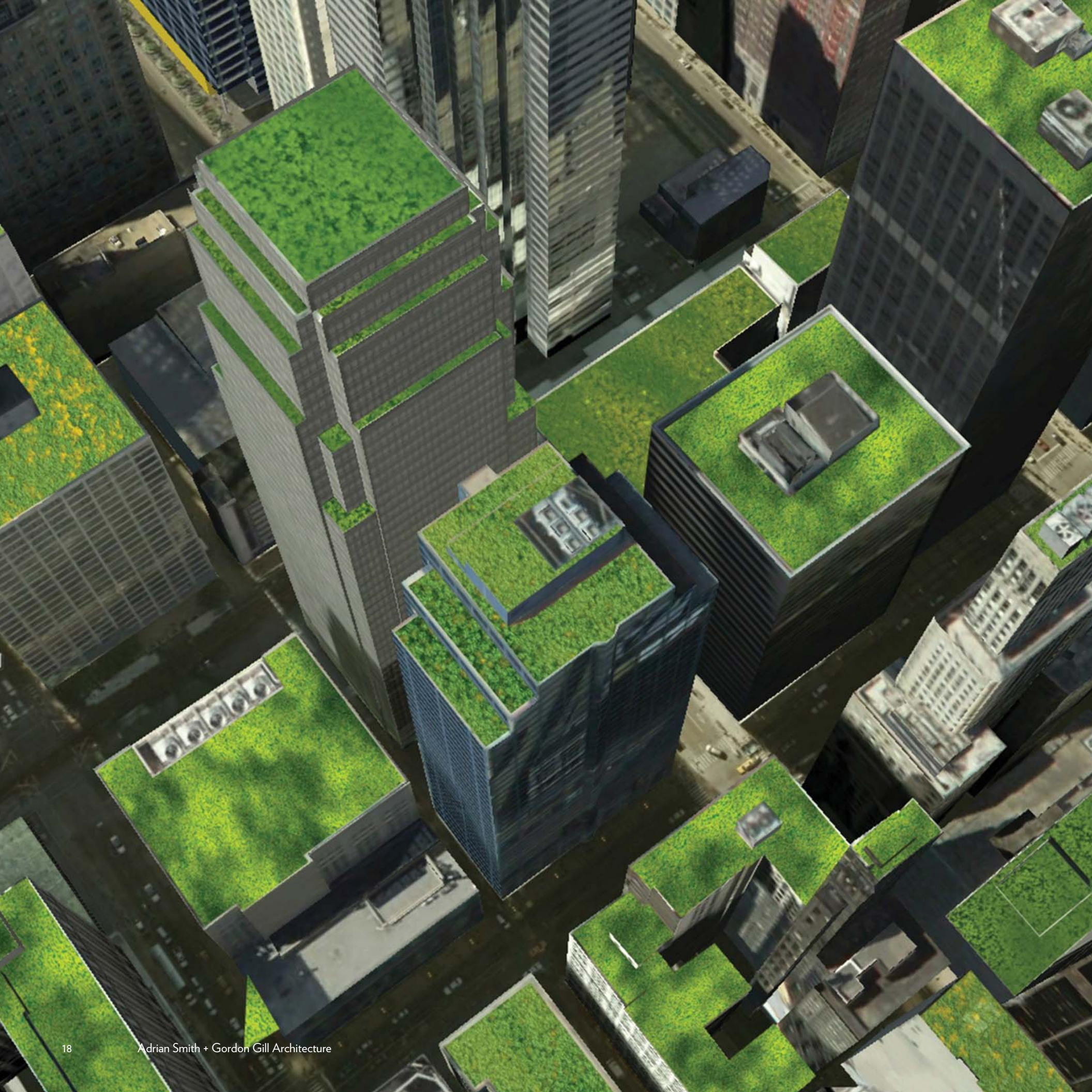


AS+GG has earned a strong international reputation through working with clients all over the world. Our staff’s diverse knowledge of design, cultures, and techniques allows us to create novel designs around the globe. We seek out ways to expand our perspective and generate new discoveries and insights into the world of design.

WHERE WE’VE WORKED

Canada	China
Greece	India
Italy	Korea
Malaysia	Qatar
Russia	Saudi Arabia
Serbia	United Arab Emirates
United Kingdom	United States









# PART TWO

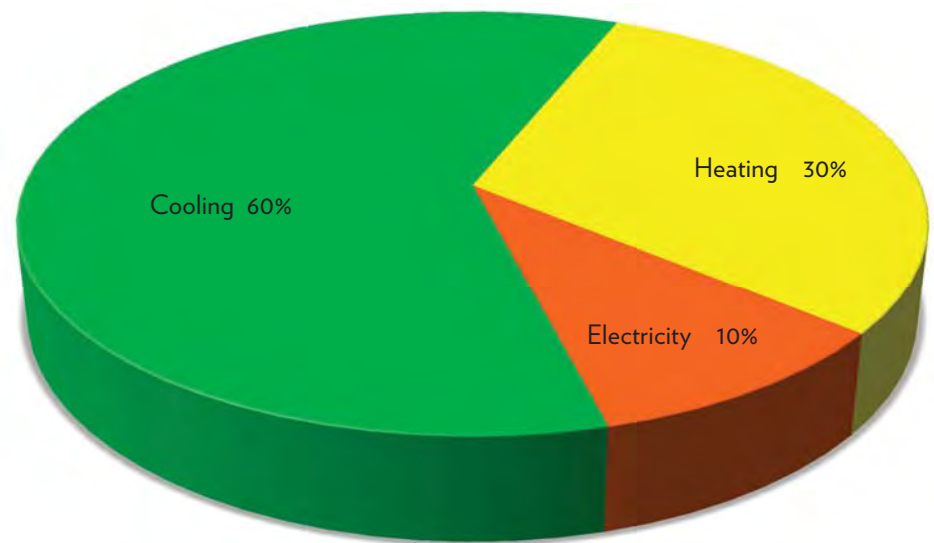
## THE ENVIRONMENT

We recognize that business activities place a certain strain on the environment. As a global design firm we need to address our environmental impact. While we are in no way perfect, we have begun implementing sustainability initiatives in an effort to reduce our environmental impact. We have instituted business practice standards to help reduce our consumption and waste production; we look for ways to incorporate the concept of sustainability at all levels of our operations. Our unique position as a design firm also allows us to tackle problems such as global warming, environmental degradation, urbanization, air quality and pollution through the design of buildings and communities for our clients. Part II: The Environment is divided into two sections, Sustainable Business Practice and Sustainable Design Practice. We strive to apply the concept of sustainability to the work we do for our clients as well as our own business practices, to positively impact the world in which we live and work.



# SUSTAINABLE BUSINESS PRACTICES: ENERGY CONSUMPTION

This data is based upon utility bills for 2010. Heating and cooling systems are controlled by the building and costs are not divided by lease. Therefore, heating and cooling consumption for 2010 are estimated based upon building totals and prorated by our square footage. Electricity consumption is from AS+GG's electricity bills from 2010.



## TOTAL: 18,506 GIGAJOULES OF ENERGY ANNUALLY

In future reports we will benchmark our energy consumption against our 2010 consumption. Our office is located on two floors of a building where one section is from the 1950's and the other is from the 1970's explaining the high heating and cooling costs. Although heating and cooling comprise the majority of our consumption, we have limited control over them since they are operated by the property owner. Changes have been made by the property owner to update building technology; building system strategies such as efficient lighting and converting continuous load systems to start and stop systems have improved energy efficiency and increased the building's Energy Star rating. We plan to work with our building manager to try and implement efficient strategies that will decrease the building's energy consumption, but electricity consumption is where we will focus our efforts to reduce energy consumption since it is where we have direct control.

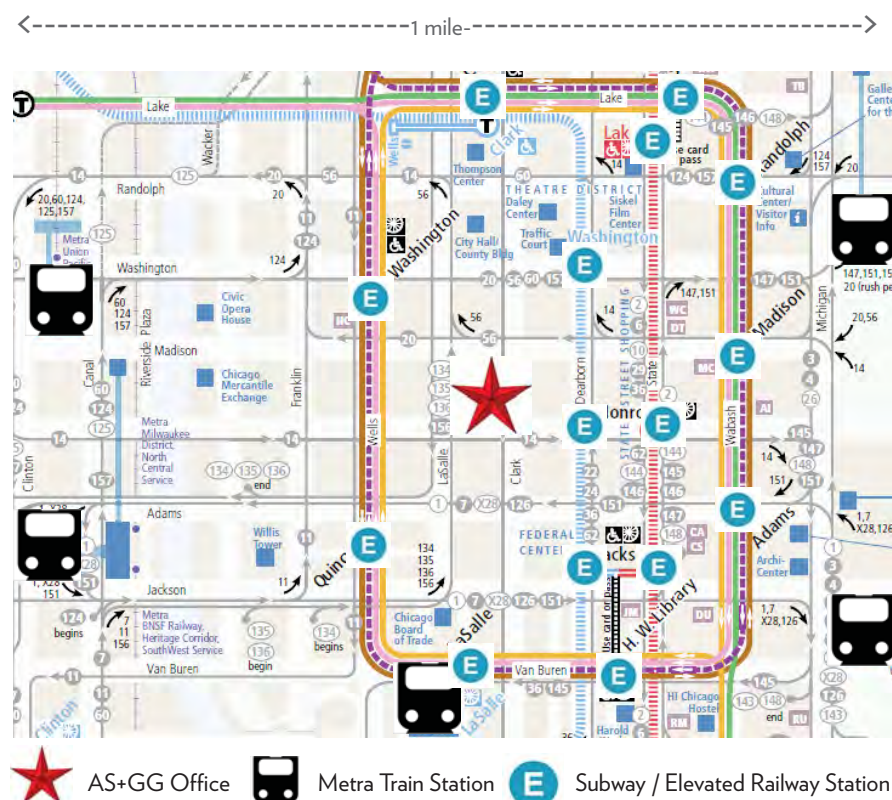
## 2011 GOALS

- Continue to track and report energy consumption
- 2% decrease in electricity consumption by implementing computer shut down policy, replacing incandescent lamps and replacing any CRT monitors with LCD monitors.
- Work with our building manager to identify potential building-wide energy saving strategies as well.

It is our intent to track our energy use yearly to compare our progress to prior years. We will focus on meeting targets of electricity reduction, since that is what we have direct control over, but we will still track heating and cooling consumption.

2009 electricity consumption: not available  
2010 electricity consumption: 508 mWh  
2011 electricity goal: 498 mWh

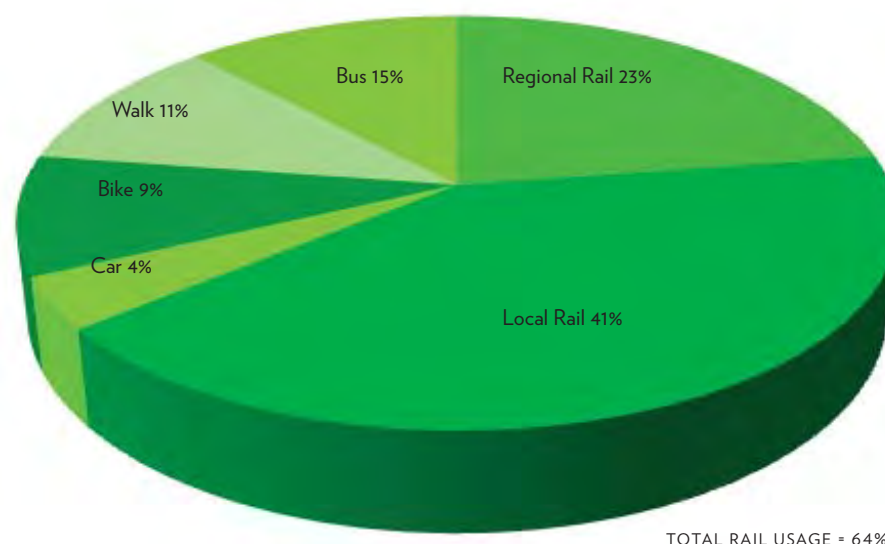
AS+GG promotes the use of alternative commuting options such as public transportation and biking to work. Our Chicago office is located in the Central Business District (the Loop) with convenient access to public transportation reaching the entire metropolitan area; Chicago's elevated trainlines (the El), subway system and bus routes provide access for city residents and Metra train routes service the suburbs of Chicago. We encourage our staff to use public transportation and offer a pre-tax mass transit program. Bicycle lockers and showers are available in our building for staff who prefer to cycle to work. We are also members of the Zipcar car-sharing program that is available to staff when necessary. Our staff have shown their commitment to sustainable commuting practices through strong participation in events such as Bike to Work Week.



## STAFF TRANSPORTATION SURVEY

- AS+GG staff were asked to complete a transportation survey in an effort to measure carbon dioxide emissions produced from commuting. The data is then used as a learning tool for our employees to be conscious of their impact on the environment. The following data is taken from this survey which had a 74% response rate. Company averages were used to calculate carbon emissions for employees who did not respond.
- Average staff distance from AS+GG office: 8.4 miles versus a U.S. average of 16 miles.
- Average yearly transport emissions per person: 583 kg CO<sub>2</sub>
- 85 tons CO<sub>2</sub> saved in 2010 by using public transit, walking and biking instead of car travel

## TRANSPORTATION SURVEY RESULTS





# RECYCLING + WASTE REDUCTION/SUSTAINABLE MATERIALS

We have implemented an office-wide waste management system to help us manage waste and resources effectively. Our strategy utilizes the well-known scheme of “reduce, reuse, recycle.” First and foremost, we have addressed the underlying issue of a lack of knowledge by educating our staff on the proper methods of recycling. We have developed a cost-effective method of separating aluminum, plastic, paper and waste. Recycling bins are conveniently located near work stations, printers and in the kitchen areas. In addition, our IT staff has developed a program for recycling batteries and electronic waste.

Our waste production has further been reduced by making reuseable dishware and utensils available. We use electronic memos whenever possible as well as double-sided printing. Our staff tries to incorporate these sustainable practices whenever applicable and is asked to think twice about their choices and their effects on the environment.

In an effort to reduce our environmental impact, we have implemented an office-wide policy to purchase sustainable materials whenever possible. We try and use recycled office supplies and FSC-certified paper whenever applicable. Our office supplies vendor participates in the Terracycle recycling program which enables us to recycle writing supplies back to them. As sustainable vendors and supplies become more widely available, we will be able to implement their services and products more.

## RECYCLING RATES

- 53% recycling rate for AS+GG compared to our building's average of 38%.
- 5,603 kg of waste recycled annually
- 11,206 kg CO<sub>2</sub> saved

2009 recycling rate: not available

2010 recycling rate: 53%

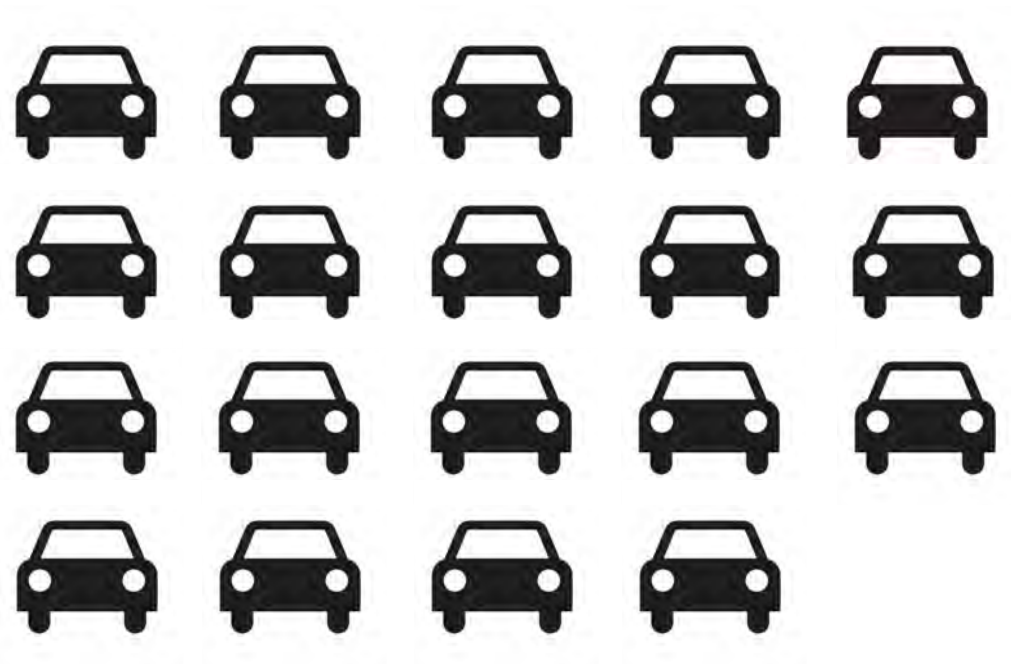
2011 recycling goal: 60%

## 2011 GOALS

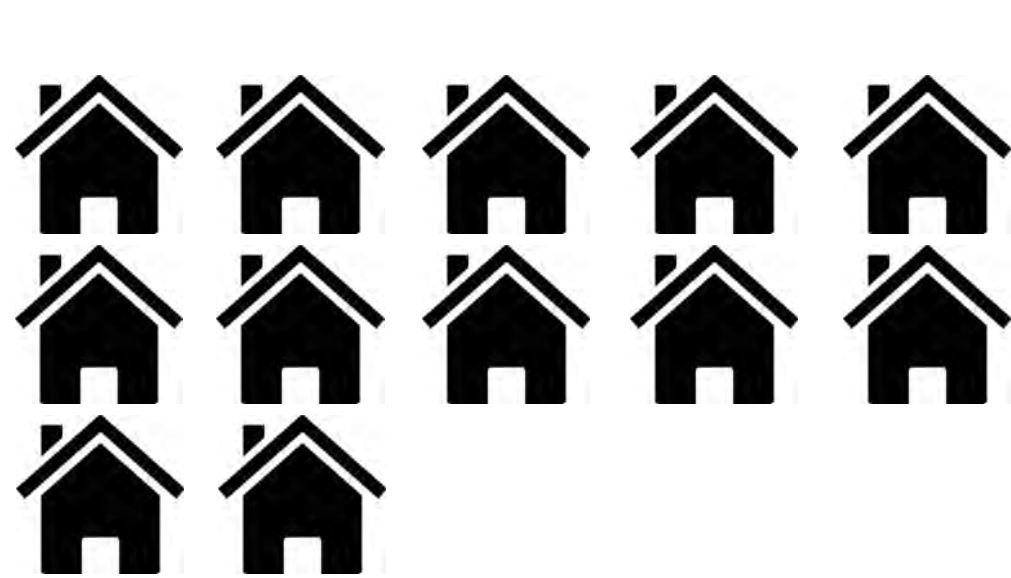
- Increase office recycling rate to 60% by increasing staff awareness and implementing a new waste management policy
- Monitor waste generation and recycling rates throughout the year
- Increase employee use of sustainable materials and supplies through increased employee awareness of vendors and policies



In 2010, our sustainable commuting and recycling efforts were the equivalent of offsetting the following emissions:



GAS CONSUMPTION  
OF 19 VEHICLES FOR  
ONE YEAR



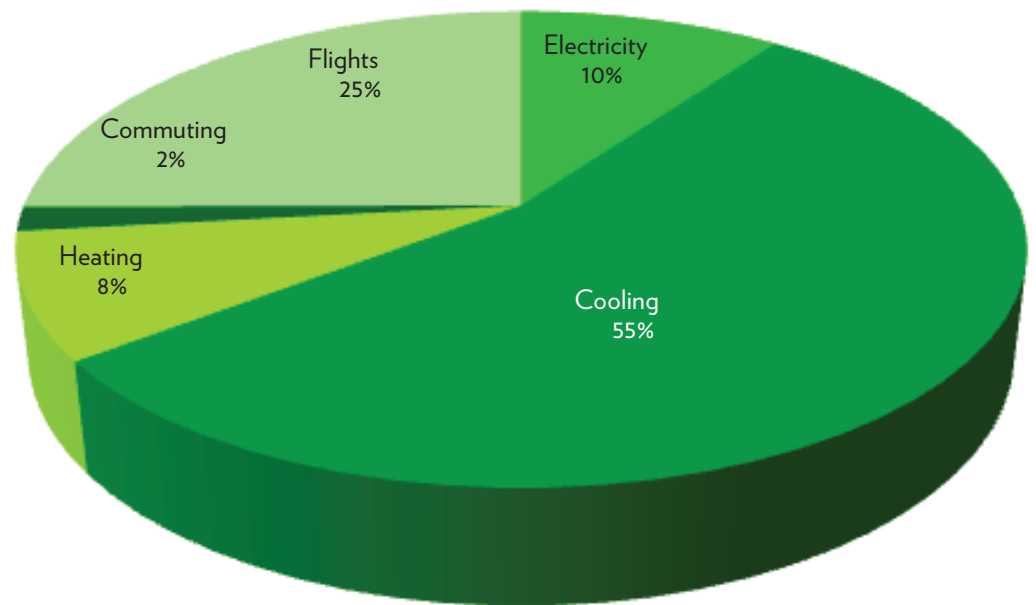
ELECTRICITY USE  
OF 12 HOMES FOR  
ONE YEAR



# 2010 CO2 EMISSIONS

The following information is based upon our 2010 electricity bills. The cooling and heating costs are based upon building totals and are estimated from our square-footage ownership. Although flights are not a direct emission, we still feel it is important to track and report them. Flight data is taken from flight records of AS+GG employees for business trips in 2010. Commuting emissions were calculated based on our transport survey.

Our major sources of carbon emissions are electricity, heating, cooling and business travel. Since this is our first year of reporting, we do not have previous years to compare to. In the future we hope to reduce emissions through our sustainable business practice initiatives.



2009 CO2 Emissions: Not available  
2010 CO2 Emissions: 816,998 metric tons  
2011 CO2 Emissions Goal: TBD

## 2011 SUSTAINABLE BUSINESS PRACTICE GOALS

- Continuously track and report office energy use, water use, and waste production
- Continue efforts to decrease energy consumption, water consumption, and waste generation
- Increase the purchase of sustainable products
- Encourage virtual meetings whenever possible
- Incorporate formal sustainability training into employee education program

## FLIGHT EMISSIONS AND VIRTUAL MEETINGS

We recognize that air travel is a significant contributor to global carbon dioxide emissions and therefore we have included our business flights in this report. As an international firm some travel is essential to meet the needs of our clients and travelling to meetings at their request is generally considered to be something that is out of our direct control. Nevertheless, in an effort to reduce travel emissions, we have implemented the use of virtual meetings whenever possible. Technology has given us the ability to conduct a significant number of meetings virtually. In our 2011 report we plan on tracking and reporting our virtual meetings and the travel emissions they have saved. This data will allow us to benchmark the percentage of meetings conducted virtually.

We focus on eight themes of sustainable design: energy, water, waste, materials, environment and ecology, health and wellbeing, community and economics. Each project is specific and each strategy is tailored to the project. We also consider our designs to meet the following organizational guidelines: LEED, BREEAM, ESTIDAMA, 2030 Challenge and the Malaysian GBI when appropriate. Below is a list of the themes and the key goals they address:

- 1 ENERGY**
  - Reduction of energy consumption
  - Generation of electricity from renewable sources
- 2 WATER**
  - Reduction of potable water consumption
  - On-site waste water management
- 3 WASTE**
  - Minimization of construction waste
  - Sustainable waste management and recycling
- 4 MATERIALS**
  - Environmentally responsible materials
- 5 ENVIRONMENT AND ECOLOGY**
  - Reduction of greenhouse gas emissions
  - Ecosystem Integration
  - Environmental Management Planning
- 6 HEALTH AND WELLBEING**
  - Indoor environmental quality
  - Health impact
- 7 SOCIAL AND COMMUNITY**
  - Integrated communities
  - Accessible places
- 8 ECONOMICS**
  - Economic viability
  - Lifecycle costing





# ENERGY

We envision structures working symbiotically with the natural world and the existing built environment. Buildings can respond to their neighbors, improving the performance and efficiency of our cities. Instead of working against the environment, we can incorporate systems into a building to harness energy, such as photovoltaics and wind turbines. Not limited by known solutions, we utilize our experience and knowledge to move forward and develop new methods and technologies as needed for our clients, and when appropriate we consider energy reduction strategies to meet the goals of building performance assessment schemes. We have developed the following strategies to address the issues of energy saving through building design.

## ENERGY DESIGN GOALS

Reduction of energy consumption

Generation of electricity from renewable sources

## STRATEGIES

Climate Analysis

High Performing Exteriors

Daylighting

Mechanical Systems

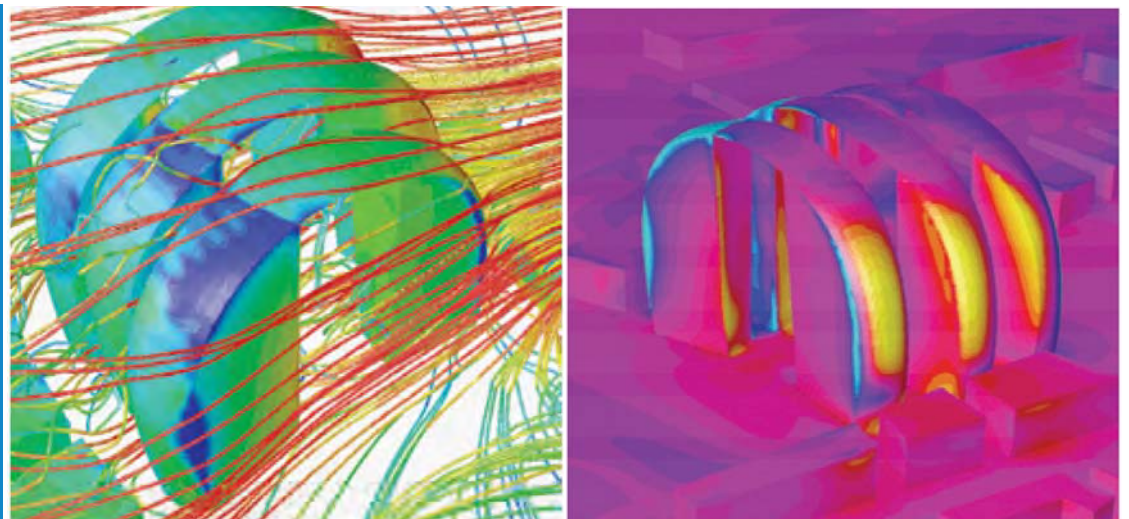
Renewable Energy

Climate analysis is completed for all projects routinely so that designs can be tailored specifically to a project's environment.

Reducing energy consumption is first addressed through design strategies and then renewable energy generation is considered to help meet the demand of the building. Energy strategies are tailored to individual project's and client's needs. When appropriate for a project, energy strategies are used to meet the benchmarks of building performance organizations such as LEED, BREEAM, ESTIDAMA, and the 2030 challenge.

## 2011 GOALS

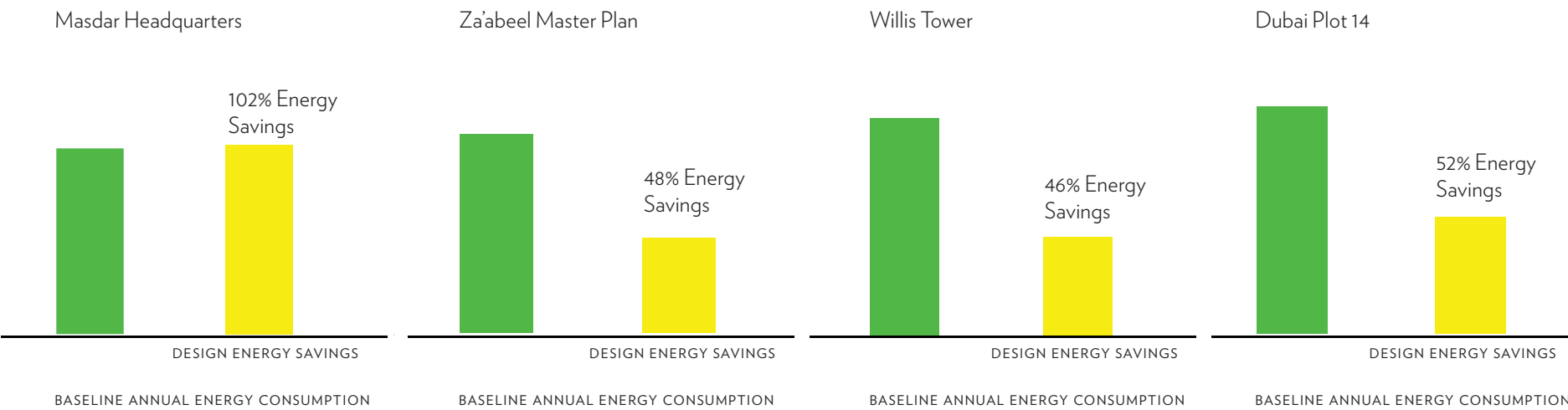
- Prepare an energy model for all projects over 5,000 m<sup>2</sup> and track design energy demand
- Request a commitment from our clients to report the actual energy use of their projects to AS+GG in order to track actual energy use versus modelled energy demand



Below is a summary of the energy saved through the sustainable design of our projects in 2010. Only projects that have energy models are reported. We used ASHRAE 90.1 (2007) as our baseline for building energy consumption. Energy is saved by utilizing the strategies highlighted on the previous page.

In the future we shall make energy modeling of our designs a standard so that the information is available for our use as well as our clients. This information will be used to hold us accountable as well as be a learning tool for our staff.

- **62% AVERAGE TOTAL PROJECT ENERGY SAVINGS FOR REPORTED PROJECTS**
- **777,753 TONS CO2 SAVED PER YEAR FOR REPORTED PROJECTS**



2010 HIGHLIGHT

102% energy savings on Masdar Headquarters project allowing for a surplus of energy to be donated back to the grid, or shared with nearby buildings, directly increasing the sustainability of its neighborhood. The centerpiece of a zero carbon, zero waste city, Masdar Headquarters was designed to perform at a level not approached by any other current building project in the world.

2011 GOALS

- Track and report project energy savings
- Target 20% energy savings for every project against an ASHRAE 90.1 baseline



# WATER

We recognize that water is a valuable resource that needs to be preserved and protected. We strive to implement water saving strategies into our designs in an effort to reduce water use by buildings. We have developed the following strategies to address the key issues of water relating to building design.

## WATER DESIGN GOALS

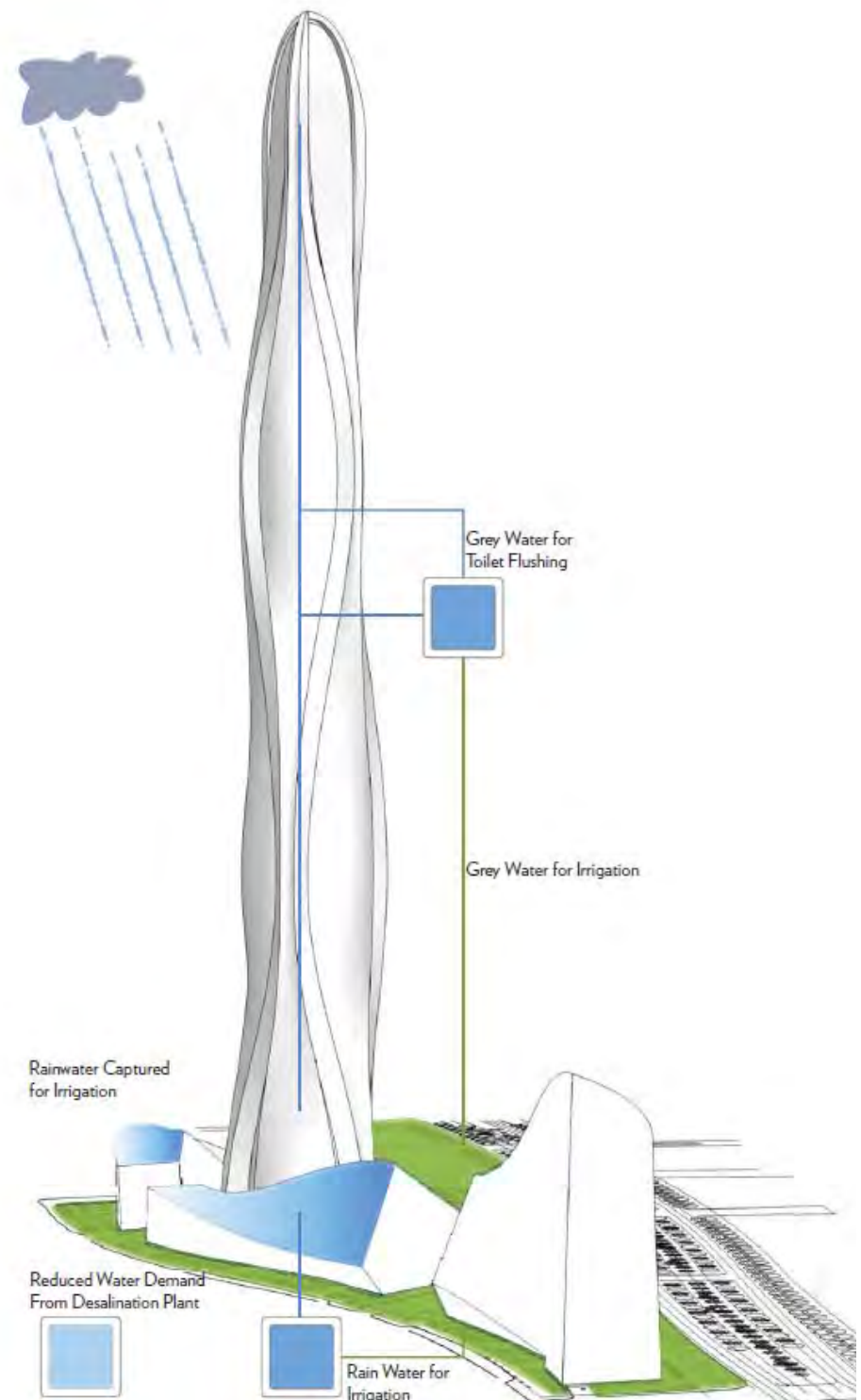
- Reduction of potable water consumption
- On-site waste water management

## STRATEGIES

- Greywater: waste water from showers, laundries and hand wash basins can be collected, treated and stored for use in flushing toilets and landscape irrigation.
- Blackwater: blackwater collected from the toilets, kitchen waste and floor drains will leave the building to the central city blackwater treatment system.
- Irrigation: rainwater can be collected, treated and stored for irrigation of plant materials throughout the site. When rainwater is not available condensate is collected from the moist air at the intake locations.
- Fixtures: low flow fixtures can be used in buildings in order to reduce water consumption.
- Stormwater management: efficient designs for effective stormwater management systems for buildings and communities.

## 2011 GOALS

- Track all designed water use per project and educate clients on the benefits and strategies of efficient water use
- Request a commitment from our clients to report the actual water use of their projects to AS+GG in order to track actual water use versus modelled water demand



As architects, addressing the issues of waste and materials is very important to us since they are so closely tied to our designs. Addressing these issues early in design stages allows for the greatest opportunities to decrease waste. Buildings can be designed taking into account construction waste and efficient waste management systems to maximize both environmental and economic gains. In this same way, materials can be chosen to optimize gains. Below is a list of strategies we have developed to address the issues of waste and materials relating to building design.

## WASTE DESIGN GOALS

- Minimization of construction waste
- Sustainable waste management and recycling

## WASTE REDUCTION AND MANAGEMENT STRATEGIES

- Design for reduced construction waste
- Design for reuse
- Optimize materials
- Waste systems design of buildings

## MATERIALS DESIGN GOALS

- Environmentally responsible materials
- High quality materials

## MATERIALS STRATEGIES

- Local or regional materials
- Readily renewable
- Recycled content
- Structure as finish
- Reusable and adaptable
- Life cycle analysis



## 2011 GOALS

- Staff education and awareness regarding designing out waste
- Incorporate construction waste reduction planning through the WRAP Designing out Waste Tool into all future projects



# ENVIRONMENT AND HEALTH

When designing a building or community, it is vital to acknowledge the surrounding environment. Analyzing the environment early on, and creating designs that work with it rather than against it, is important to us. Using adaptive ecosystem management and assuring the integrity of ecological processes at the site is crucial to the wellbeing of the community. The following strategies have been developed in order to address these environmental concerns. Health and wellbeing of the community is directly tied to this. We strive to create places that impact resident's health in a positive way using the following strategies to address these environmental and health issues.

## ENVIRONMENT AND ECOLOGY DESIGN GOALS

- Reduction of greenhouse gas emissions
- Ecosystem integration
- Environmental management planning

## ENVIRONMENT AND ECOLOGY STRATEGIES

- Climate analysis
- Reduced energy consumption
- Reduced water consumption
- Efficient waste management
- Green roofs
- Public transport accessibility
- Habitat restoration

## HEALTH AND WELLBEING DESIGN GOALS

- Indoor environmental quality
- Health impact

## HEALTH AND WELLBEING STRATEGIES

- Green roofs
- Natural ventilation
- Public transport accessibility
- Daylight exposure

### 2011 GOALS

- Research metrics used to estimate occupant health / productivity / satisfaction within the built environment and model these during design and occupancy phases.



# SOCIAL AND ECONOMIC PRACTICES

We strive to design buildings and communities that are “healthy” in a social and economic sense just as they are in terms of human health. It is important to create places that are inclusive and that develop into vibrant, sustainable communities with a functioning social system. A project must make economic sense to be sustainable, which is why we take a proactive economic approach to all our projects, reviewing all design options for economic viability with our clients. We work with cost consultants to undertake lifecycle cost analysis that looks at the project as a whole. The following strategies are utilized to create solutions to these social and economic concerns.

## SOCIAL AND COMMUNITY DESIGN GOALS

Integrated communities  
Accessible places

## SOCIAL AND COMMUNITY STRATEGIES

Public transport accessibility  
Demographically inclusive  
Green space

## ECONOMIC GOALS

Economic viability  
Lifecycle costing

## ECONOMIC STRATEGIES

Cost savings  
Occupancy levels  
Lifecycle costing





# 2010 PROJECTS: SUSTAINABLE DESIGN UTILIZED

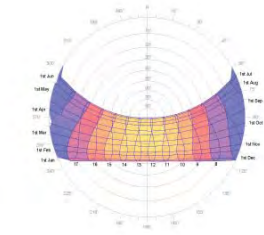
## 2010 PROJECT DESIGN HIGHLIGHTS

Climate analysis is performed routinely on all of our projects, with the results enabling us to optimize the passive environmental design of the building, reducing the heating and cooling demand, improving occupant comfort and reducing construction costs.

High performing exterior walls were utilized in all of our 2010 projects to improve a building's energy performance. It is estimated that improvements to the exterior wall of the Willis Tower design could reduce heating and cooling demand by up to 60%.

Daylight harvesting saves electrical energy while also improving the building's indoor environmental quality. Daylighting methods utilized in our 2010 projects included the use of light shelves, light tubes, advanced lighting and shading controls and higher ceilings.

Renewable energy is utilized in conjunction with building design strategies to help meet the needs of building energy demand. The Centralcon Tower design included PV panels on the rooftop to help meet the building's energy demand. The Federation of Korean Industries Tower uses a BIPV system in the curtain wall that creates self shading (thereby reducing cooling demand) as well as generating electricity.



CLIMATE ANALYSIS



HIGH PERFORMING BUILDINGS



DAYLIGHTING



RENEWABLE ENERGY



#### MECHANICAL SYSTEMS

Highly efficient mechanical systems were utilized in building retrofit designs as well as new building designs in 2010. Retrofit designs, such as Willis Tower, included MEP system upgrades that contributed to the total building energy savings.



#### GREEN ROOFS

Green roofs help contribute to better building quality in both aesthetics and climate control. They were used in six of our 2010 projects to improve the overall sustainability and beauty of the buildings' design.



#### WATER SAVINGS

Advanced water saving strategies were utilized in six of our 2010 projects. Efficient water systems and fixtures used in the Masdar Headquarters design made the building 70% more efficient than a building of its typical size and type.



#### MATERIALS

Selecting materials that have a low embodied carbon, are durable, of high quality and are manufactured locally or regionally was a focus for projects in 2010. This strategy helps support local economies while also reducing lifecycle carbon dioxide emissions of the buildings.



#### WASTE

Waste can be reduced in both construction and operational phases of buildings. Design techniques can be utilized to reduce waste generation during the assembly of a building, as well as developing efficient waste management systems for building operation.







## **PART THREE** WORKFORCE & COMMUNITY

We foster a challenging and rewarding workspace and understand that the encouragement and development of each member of our staff will advance the practice of architecture. The business standards and practices outlined in the following section are implemented in hopes of bettering our staff as well as our organization.

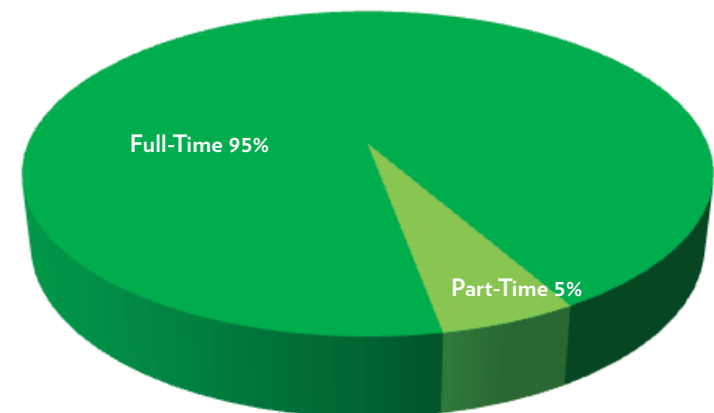


# WORKFORCE + COMMUNITY

The successful business operation of AS+GG is built upon ideals of fair dealing and ethical conduct of our entire organization. We hold regard for the highest standards of conduct and professional and personal integrity. All AS+GG employees must follow the company's Code of Ethics and Conduct governing:

- Equal opportunity employment
- Solicitation of fellow employees
- Outside employment
- Confidentiality
- Sexual and other forms of harassment
- Conflicts of interest
- Acceptance of gifts
- Violence in the workplace
- Drug and alcohol use
- Problem resolution

WORKFORCE



New hire rate= 12%

Turnover rate= 22%

## PERFORMANCE REVIEWS

AS+GG's performance appraisal system is designed to communicate performance standards and to evaluate performance results. We strive to enhance employee development and work performance. We look to set goals and objectives that allow employees to maintain their career path. All employees that have worked with AS+GG for 6 months or more receive an annual performance review.



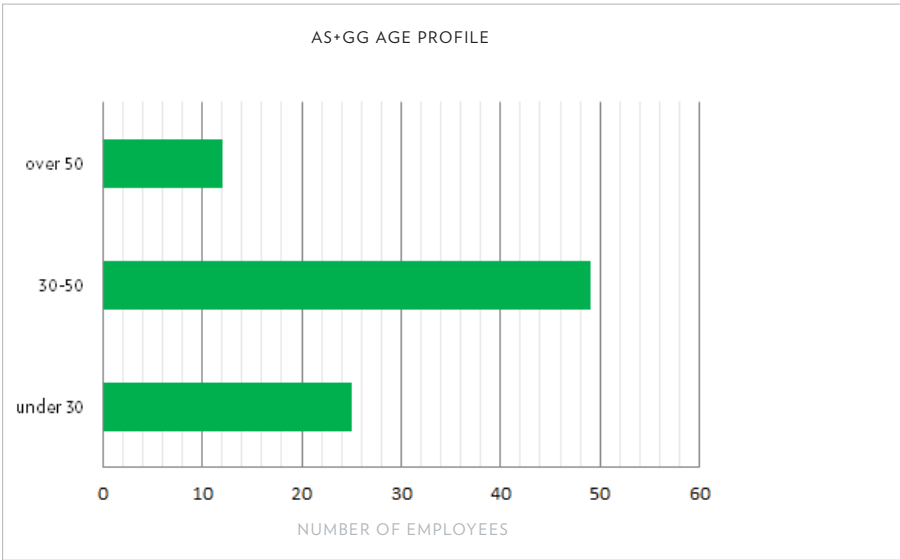


AS+GG encourages a diverse workforce in order to reflect the multifaceted world in which we live. We value the knowledge that diverse backgrounds bring to our firm and our clients. We use the criteria of merit, qualifications, and abilities to determine hiring decisions and promotions within the organization.

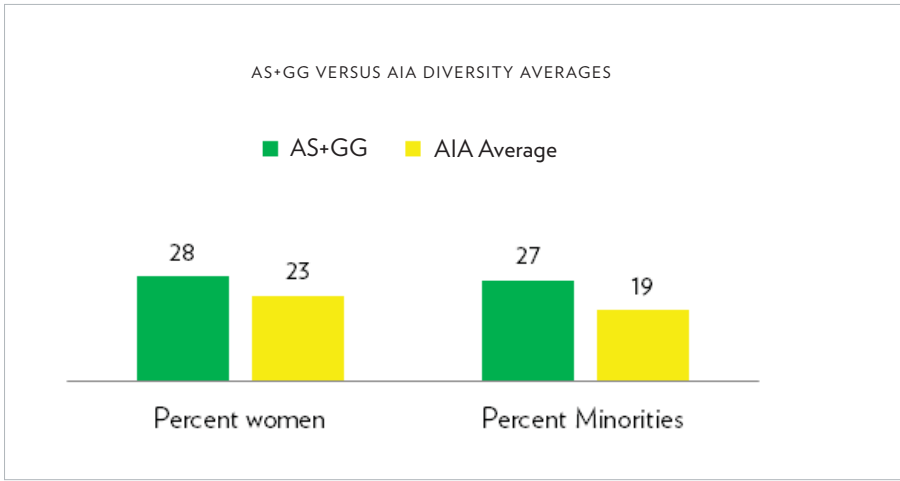
AS+GG reaches out to minorities and encourages their involvement in the architectural community. For example, in 2010 Gordon Gill spoke at an Architectos Chicago event, which reaches out to Latino architects to help enrich the profession through different cultural views and practices.

AS+GG EMPLOYEE COUNT BY RACE				
ETHNICITY	FEMALE	MALE	TOTAL	PERCENTAGE
AFRICAN-AMERICAN	0	0	0	0%
ASIAN	6	9	15	16%
HISPANIC	2	4	6	7%
WHITE	18	53	71	77%
TOTAL	26	66	92	100%

This graph is a comparison of our staff’s gender and ethnicity percentages compared to the American Institute of Architects averages for firms. The AIA averages are from a survey of 2,700 firms across the country. AS+GG is proud that we employ a greater number of women and minorities relative to other architectural firms.



Staff between 30 and 50 years comprise the largest employee age group at AS+GG, indicating the mid to senior level of our staff. This is a reflection of the past three years’ economic situation, during which a reduction in junior less-skilled staff was required. As the economy has improved we have brought on summer interns as part of our recruitment strategy and hope to increase the number of entry-level staff. We strive to create an environment that fosters development and mentoring. We encourage professional and personal development of our employees.



2011 GOALS

- Increase community outreach through events that promote the enrichment of the architectural community
- As the economy improves, increase the amount of entry level staff

# COMPETITIVE STAFF BENEFITS

AS+GG benchmarks and evaluates its benefits program in order to maintain competitiveness.

## BENEFITS OFFERED

- 401(k) savings plan
- Subsidized healthcare programs including medical and dental insurance
- Life and disability insurance
- Transportation benefits, which allows employees to set aside pre-tax earnings for mass transit and parking expenses
- Paid Time Off (PTO)
- Holidays
- Wellness programs
- Life and disability insurance
- Flexible Spending Account (FSA) and Dependent Care Spending Account
- Subsidized training and self improvement courses
- Subsidized annual architectural memberships

## TRAINING AND EDUCATION

Employee development and growth is essential to the success of our company. In order to promote this we provide employee training and learning opportunities for both professional and personal growth. We offer the following programs:

- Subsidized AIA continuing education classes
- Subsidized lunch and learn opportunities
- Study guides for LEED examinations
- Internal AS+GG LEED exam training
- Software training
- Senior staff attend the AIA convention
- Opportunities to attend professional and cultural lectures
- Opportunities to attend cultural exhibitions and musical performances
- Intern architect mentorship program
- Friday office-wide design and project reviews

## IN 2010

- 520 person hours of training during working hours
- 76% of full-time staff participated in our 401k program
- 4 project risk management webinars offered by our insurance company
- 320 person hours of formal software training
- 20 people participated in external training days
- 98% participation in project software training
- 10 Staff members attended the AIA convention



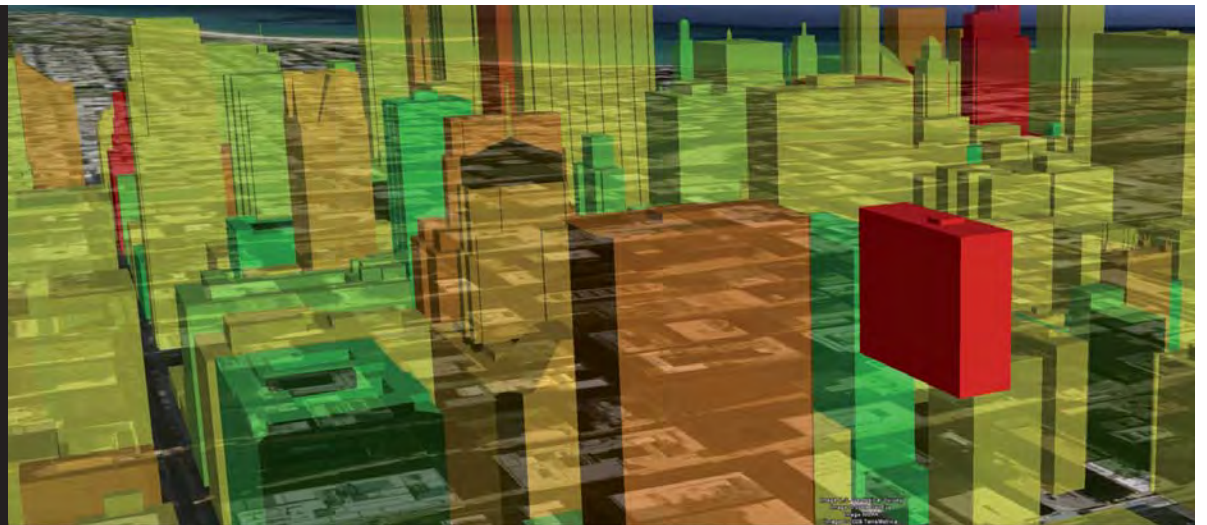
*Partners of AS+GG receive an award for the Chicago DeCarbonization Plan at the 2011 AIA Convention*

AS+GG received the following awards in 2010:

- AIA Award, Design Excellence, Unbuilt Category, Matrix Gateway Complex
- WAN Awards 2010, Urban Design, Chicago Central Area DeCarbonization Plan
- 2010 Arabian Property Award for Architecture, Mideast Region, International Property Awards, Masdar Headquarters
- R+D Award for Sustainability, Chicago DeCarbonization Plan, Architect Magazine
- International Architecture Award, Vancouver Residential Complex
- American Architecture Awards, Vancouver Residential Complex
- Dublin-based European Centre for Architecture, Art, Design and Urban Studies Award, Vancouver Residential Complex
- P/A Award, Architect Magazine, Matrix Gateway Complex



Matrix Gateway Complex



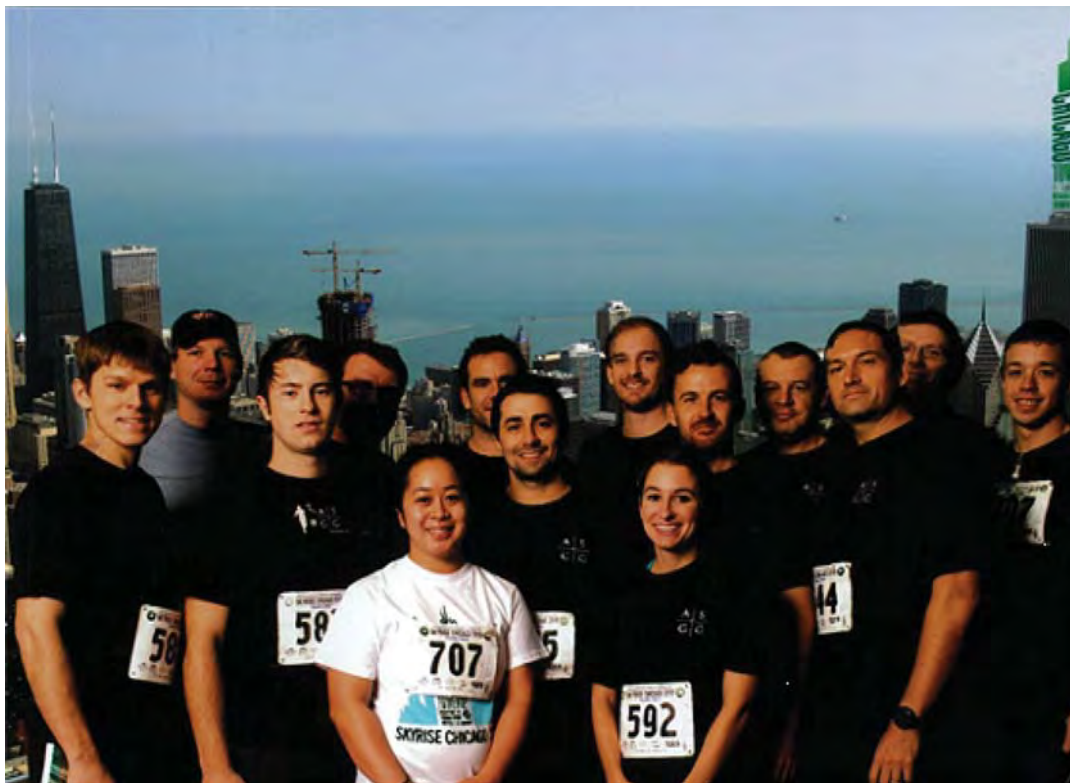
Chicago Loop DeCarbonization Plan



# CHARITABLE CONTRIBUTIONS

AS+GG recognizes the importance of service and giving back to the community. In 2010, AS+GG donated following charities:

- ACE Mentor Program of Illinois, Inc
- American Red Cross: Haiti Relief Fund
- Boys Town
- Chicago Architecture Foundation Program
- Chicago House
- Doctors Without Borders
- Greater Chicago Food Depository (JP Morgan Chase Corporate Challenge)
- IIT College of Architecture
- New Artists Society
- Northwestern University Library
- Rehabilitation Institute of Chicago
- Society of Architectural Historians
- Steppenwolf Theatre Company
- The Sapling Foundation
- The School of the Art Institute of Chicago



*AS+GG staff participate in the Willis Tower Stair Climb that benefited the Rehabilitation Institute of Chicago.*

We encourage our staff to participate in societies and organizations related to our business and other civic activities. Community involvement helps our employees as well as the community grow. These are some of the organizations we actively participate in:

- 2030 Challenge
- ACE Mentor Program of Illinois
- American Institute of Architects (AIA)
- BRE Environmental Assessment Method (BREEAM)
- Chicago Architecture Foundation
- Chicago Club
- Chicago Committee on High-Rise Buildings
- Chicago Literary Club
- Chicago Sister Cities: China Program
- Chicago Women in Architecture
- Compassion for Migrant Children, Beijing, China
- Council on Tall Buildings and Urban Habitat
- Economic Club of Chicago
- Friends of the Park, Chicago
- Green Office Challenge
- International Interior Design Association
- Project Management Institute
- Royal Institute of Architects (RIBA)
- Society for College and University Planning (SCUP)
- The Chartered Institute of Waste Management (CIWM)
- U.S. Green Building Council: Chicago Chapter
- Union League Club of Illinois
- University Club
- Urban Land Institute

*AS+GG employee Dan Retzner works with students of the ACE mentor program in the AS+GG office. ACE gives high school students an introduction to architecture, construction, and engineering; this year 92% of the students were minorities. In 2010, 8 members of our staff volunteered as mentors and our CFO/COO, Kathy Fanning, served as the treasure of ACE.*











# **PART FOUR**

## 2011 GOALS

Adrian Smith + Gordon Gill Architecture identified a number of goals for 2011.

# 2011 GOALS SUMMARY OF SUSTAINABLE BUSINESS PRACTICES

## ENERGY CONSUMPTION

- Continue tracking and reporting office energy consumption
- 2% decrease in electricity consumption by implementing computer shut down policy, replacing incandescent lamps, and replacing any CRT monitors with LCD monitors
- Work with our building manager to identify potential building-wide energy saving strategies

## TRANSPORTATION

- Conduct 2011 transport survey measuring employee transport habits
- Keep a log of all virtual meetings and flights taken by staff

## RECYCLING AND WASTE REDUCTION

- Increase office recycling rate to 60% by increasing staff awareness and implementing a new waste management policy
- Monitor waste generation and recycling rates throughout the year
- Increase employee use of sustainable materials and supplies through increased employee awareness of vendors and policies

## ENERGY

- Prepare an energy model for all projects over 5,000 m2 and track design energy demand
- Request a commitment from our clients to report the actual energy use of their projects to AS+GG in order to track actual energy use versus modelled energy demand
- Target 20% energy savings for every project against an ASHRAE 90.1 baseline



## WATER

- Track all water use per project and educate clients on the benefits and strategies of efficient water use
- Request a commitment from our clients to report the actual water use of their projects to AS+GG in order to track actual water use versus modelled water demand

## WASTE AND MATERIALS

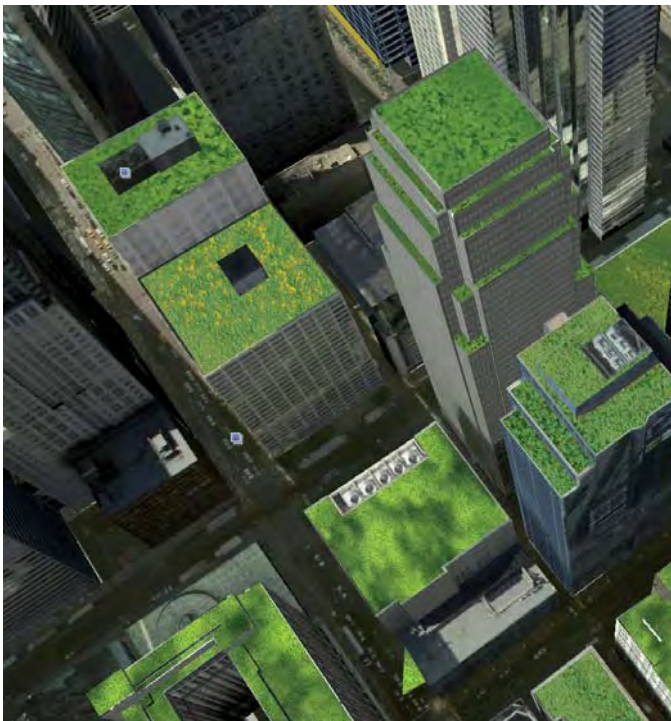
- Incorporate construction waste reduction planning - through the WRAP Designing out Waste Tool into all future projects

## ENVIRONMENT AND HEALTH

- Research metrics used to estimate occupant health/productivity/satisfaction within the built environment and model these during design and occupancy phases

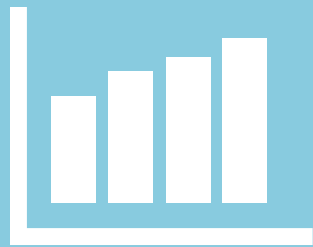
## WORKFORCE AND COMMUNITY

- Increase community outreach through events that promote the enrichment of the architectural community
- Increase the number of entry level staff









# PART FIVE

## GRI TABLE

Adrian Smith + Gordon Gill Architecture was founded in 2006 by partners Adrian Smith, Gordon Gill and Robert Forest. Headquartered in Chicago, Illinois, the firm specializes in architecture, urban planning, interior design and sustainable design. We also have offices in Beijing and Dubai. AS+GG's architects have expertise in a range of building types, including supertall towers, large-scale mixed-use complexes, corporate offices, exhibition facilities, cultural facilities and museums, civic and public spaces, hotels and residential complexes, institutional projects and high-tech laboratory facilities.

AS+GG uses an integrated, performative design approach that emphasizes a symbiotic relationship with the environment. We strive to seek out projects that are focused on sustainable issues that can become a part of a larger global effort of sustainability. We are not limited by new building projects; included in our sustainable approach are the retrofitting and rejuvenation of existing building projects.



# GLOBAL REPORTING INITIATIVE TABLE

AS+GG believes consistent CSR reporting measures are valuable for business worldwide, and we have adopted the Global Reporting Initiative (GRI) methodology.

Some of the standards and indicators of the GRI are not applicable because of the nature of our organization. Wherever the GRI is applicable we have included information to the best of our ability.

Following is a table summarizing the contents of this report and the corresponding guidelines from the Global Reporting Initiative, Sustainability Reporting Guidelines, version 3.0 (G3).

STRATEGY AND ANALYSIS	
GRI Indicators 1.1-1.2	Pages: 5,7,9
ORGANIZATIONAL PROFILE	
GRI Indicators: 2.1-2.10	Pages: 11,12,13,14,15,16,17,39
REPORT PARAMETERS	
GRI Indicators: 3.1-3.13	Pages: Cover,5,49
GOVERNANCE, COMMITMENTS AND ENGAGEMENT	
GRI Indicators: 4.1-4.17	Pages: 11-14
PERFORMANCE INDICATORS	
GRI Indicators/Economic Performance	Pages: 39,41
GRI Indicators/Environmental Performance	Pages: 20,21,24,27
GRI Indicators/Social	Pages: 15,37,38,39

For more information on the Global Reporting Initiative, visit: [www.globalreporting.org](http://www.globalreporting.org)





## PART SIX FEEDBACK

It is intended that a detailed Corporate Sustainability Report will be issued every year from AS+GG. This report was created in order to establish transparency regarding our economic, environmental and social impacts and procedures.

AS+GG welcomes feedback regarding the information in this report. If you wish to provide feedback, please contact Christopher Drew, PhD., Director of Sustainability, at [chrisdrew@smithgill.com](mailto:chrisdrew@smithgill.com).