COLLABORATION ENABLES MERCK TO TAKE A HUGE, SUSTAINABLE LEAP FORWARD
This presentation of Merck & Co., Inc., Kenilworth, N.J., USA (the “company”) includes “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of the company’s management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company’s ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company’s patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

The company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the company’s 2016 Annual Report on Form 10-K and the company’s other filings with the Securities and Exchange Commission (SEC) available at the SEC’s Internet site (www.sec.gov).
AGENDA
1. ABOUT MERCK
2. NEW ENVIRONMENTAL SUSTAINABILITY GOALS
3. STRONG FOUNDATION YIELDED ACTION
4. VPPA EXPERIENCE AND TEAM INSIGHTS

KEY THEMES

Strong foundation in energy category management crucial to enable action on renewables splash

Sponsorship and proactive executive outreach is crucial early

Decisions can be made when you align goals with outcomes, risk tolerance, and team passion
FOR MORE THAN A CENTURY, MERCK HAS BEEN INVENTING TO SOLVE SOME OF THE GREATEST CHALLENGES TO PEOPLE’S HEALTH AND WELL-BEING AROUND THE WORLD.

BUSINESSES
- Prescription medicines
- Vaccines
- Biologic therapies
- Animal Health products

2017 REVENUES
$40.1 billion, 57% of sales come from outside the United States

2017 R&D EXPENSE
$9.98 billion; 20+ product pipeline programs in late-stage development

HEADQUARTERS
Kenilworth, NJ, U.S.A.
operating in more than 140 countries

Merck & Co., Inc. is our legal name and is listed on the New York Stock Exchange under the symbol “MRK.”

EMPLOYEES
approximately 69,000 worldwide (as of 12/31/17)
WE ARE INSPIRED BY
A SHARED VISION AND
A MISSION TO SAVE AND
IMPROVE LIVES.

VISION
To make a difference in the lives of people globally through our innovative medicines, vaccines and animal health products. We are committed to being the premier, research-intensive biopharmaceutical company and are dedicated to providing leading innovations and solutions for today and the future.

MISSION
To discover, develop and provide innovative products and services that save and improve lives around the world.
We believe it is our responsibility to address the health needs of patients and society through transformational science: delivering vaccines, medicines and animal health products that can help millions around the world.
ENVIRONMENTAL SUSTAINABILITY

We are innovating environmentally-sustainable ways to meet the world’s health needs now and in the future.

- 2.35B gallons of water saved over the last 5 years
- ONLY 29% of operational waste sent to landfills and incinerators (goal is less than 20% by 2025)
- 13% of greenhouse gas emissions reduced since 2015 (goal of 40% reduction by 2025)
Our Approach to Corporate Responsibility - 4 Priority Areas

ACCESS TO HEALTH
We aspire to improve access to health by discovering, developing and providing innovative products and services that save and improve lives.

ENVIRONMENTAL SUSTAINABILITY
A healthy earth is essential to human health, and the sustainability of our business.

EMPLOYEES
We recognize that our ability to succeed depends on the unique knowledge, experience, skills, diversity and teamwork of our employees.

ETHICS & TRANSPARENCY
Through our unwavering commitment to ethics and transparency, we earn the trust and confidence of our stakeholders.

MERCK
INVENTING FOR LIFE
We have established environmental sustainability goals that help position our company to succeed in an increasingly resource-constrained world.

**ENVIRONMENTAL SUSTAINABILITY GOALS**

**PACKAGING DESIGN FOR ENVIRONMENT**
100 percent of our new human health products will have packaging reviewed for environmental impact and improvement.

**GREEN & SUSTAINABLE SCIENCE**
≥90 percent of our new human health active pharmaceutical ingredient processes will meet internal sustainability targets at launch.

**WATER USE & RISK**
We will maintain global water use at or below 2015 levels.

**SUPPLY CHAIN**
We will engage with our key suppliers and request them to identify GHG emission and water use reduction opportunities.

**RENEWABLE ENERGY**
At least 50 percent of our purchased electricity will come from renewable sources.

**WASTE**
≤20 percent of our global operational waste will be sent to landfills and incinerators.

**GREENHOUSE GAS (GHG) EMISSIONS**
We will reduce global Scope 1 and market-based Scope 2 GHG emissions ≥40 percent from 2015 levels.

**SUPPLY CHAIN**
≥90 percent of our strategic suppliers with the highest environmental impacts will set their own GHG emission and water use reduction targets.

1 We have defined "purchased electricity" as electricity sourced from external suppliers as well as renewable electricity that was generated and utilized on-site where we retained the renewable attributes or where we have obtained renewable attributes through contract.
Environmental Sustainability Strategy - Updated

**Efficient Operations**
- Energy Efficiency
- Minimize Material & Resource Use
- Decouple Water Use from Growth

**Design for Environment**
- Renewable Energy
- Green & Sustainable Science
- Product Packaging
- Reliable Facilities & Equipment

**Reduce Impacts & Risks in Value Chain**
- Understand Life Cycle Impacts
- Manage Water & Climate Risk
- Responsible Sourcing
- Supplier Engagement

POSITION MERCK FOR LONG-TERM SUCCESS IN A RESOURCE-CONSTRAINED WORLD
Global Energy CoE - Supporting the Sites

- Focused on reducing energy demand
- Influence & report Merck’s global energy consumption
- Manage the Energy Capital Fund
- Internal and External Benchmarking
- Promote the energy program internally and externally
A STRONG FOUNDATION IN PEOPLE AND PRACTICE

Investment Focus

The cheapest and greenest kWh is the one you don’t use!
Energy Savings Through Reliability

Fixes Broken Equipment and Reduces Energy Consumption
Energy Savings Through Reliability

Energy Kaizen
Only focuses on defective equipment causing energy waste
Operating our equipment more efficiently
Energy Savings Through Operations

Treasure Hunt (Behaviors)

Lean Utilities (Systems)
Energy Savings Through Design

Comes at end of useful life or for new installs.
IF IT AIN’T BROKE, DON’T FIX-IT SHOP

Bring in your unbroken items, and we won’t fix them on the spot. FINANCING AVAILABLE.
Energy Savings Through Design

Total Cost of Ownership & Engineering Standards

Asset Lifecycle

Business Needs Analysis → Design → Purchase → Store → Install → Start-Up → Operate → Maintain → Modify/Upgrade → Dispose
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<th>Site</th>
<th>Bill Submittal Adherence</th>
<th>Energy Consumption Change</th>
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Data for Illustrative Purposes Only
ENERGY STAR AWARD 2018

PARTNER OF THE YEAR
Sustained Excellence
RISK MANAGEMENT PROGRAM

- Procurement responsible for global energy sourcing of natural gas, electric power, fuel oil, etc.
- Global program with energy consultant
- Regular CPO and CFO engagement on program performance
- Visibility to emerging sustainability goals and renewables opportunities were carefully introduced in these forums

New emerging view…

- Environmental sustainability performance risk is viewed as “any other risk” and has been mainstreamed.
ENERGY COLLABORATION “PYRAMID”

Sustainability CoE

GHG Reductions

Energy CoE

Procurement

Finance

Verifies- Willing Partner

Enables

Verifies

Enables

Verifies- Willing Partner

Chris Lundin
Josh Heeman
George Mahoney
Chris Broome
Mark O’Connor
Janet Friday
Michael Waslin
Jack Gavin
Doug Yunaska
Phil Hodes
Chris Lundin
Josh Heeman
George Mahoney
Chris Broome
Mark O’Connor
Janet Friday
Michael Waslin
Jack Gavin
Doug Yunaska

Proprietary
**RENEWABLE ENERGY - DIVERSIFIED PORTFOLIO APPROACH**

**Blended Approach**
- Purchase REC$s
- On-Site Direct Investment / PPA
- Virtual PPA
- Provider Supplied Renewable

**Steady Growth, then VPPA Online**

**What’s Next?**
- International Portfolio of On-Site, Above Site Contracting for Renewables
- Co-Location Focus
- Open Space Re-purposing
- Business Process Updates
- On to Scope 3
HOW, WHAT, WHEN?

• Opportunity assessments leveraging external energy consultants
• RMI Renewables Buyer Bootcamp
• CFO and CPO Insights
• Select the right project in the right location with the right technology
• VPPA = Pure Sustainability Play (Internal Sales Message)
• Final developer projects identified and Letter of Exclusivity negotiated within 4 months of Bootcamp
• Final VPPA agreement executed early January 2018
  • Commercial negotiations finalized, legal reviews, proactive “pause” during 2017 Tax Cuts & Jobs Act adventures in D.C.
KEY INGREDIENTS TO HIGH PERFORMING TEAM

- Willingness to work across organizational boundaries
- Using existing sponsorship mechanisms to gain support for bold proposals (SSC, etc.)
- Every team member contributes their ideas, but is truly open to ideas expressed by others
- There is no “right way”, only the “way that works” – if you hit a closed door, find an open one.
- Egos get checked at the door – there is no room or time for them
- Everyone wants to be part of something bigger than they are
- If you don’t understand, ask – there are no stupid questions – the team takes time to teach
- We keep going until someone tells us “no” – and no one has
- It is all about what “we” can accomplish together, not what “I” did
- Bring new people into the team and include them in the success
- Thank those that helped you along the way

- TRY to understand each other’s objectives and push “value” as opposed to our own agenda
- Feel comfortable to object to a line of thinking
- Recognize that not everything we do pays off immediately. Some things get shelved but when the time is right with (the market, leadership, expectations) we are ready
- Having a strategy in mind to manage / influence up our own chain of command
- Create trust with all levels of organization and recognize that not everyone will buy-in, but at least work to make those who don’t fully buy-in understand the change and the need for the change.
- Resilience, courage, confidence in the business case while faced with resistance
- Sustained sponsorship by leaders of team from all organizations
- Sense of humor

EDUCATE

INFLUENCE

FLEXIBILITY

SPONSORSHIP

COLLABORATION &

PERSERVERANCE

COMMUNICATION/TRANSPARENCY

SENSE OF PURPOSE

MERCK

INVENTING FOR LIFE
We’ve Made A Lot of Progress…

► On track to achieve goals (so far) & reporting to Executive Committee quarterly
► Perception has changed from “NICE TO DO” to “HAVE TO DO”
► Pockets of strong management sponsorship
► Growing cohort of internal ambassadors
► Conversation changing from Push → Pull
► Public reactions to external communications validating importance
► Signed our 1st big Renewable Energy deal (w/CFO Approval)
► Completed our 1st full LCA

Mostly “Bottom Up” Effort
Keys to Success

- Keep going until someone says STOP
- Talk to anyone who will listen
- If you get NO for an answer, seek another path
- Become a trusted resource
- Repeat the message
- Be inclusive & grow internal networks
- Just start…..
THANK YOU