

“I do a lot of small investing transactions, including via Triodos Crowdfunding, and have never seen the unsecured junior creditor position explained so clearly, nor the pros and cons of taking on bank debt. In Triodos we trust - and Solar for Schools.”

“I am starting to become wary of emails like this, having received similar ones from Abundance Investment just before their green investments went under and I lost every single penny. Will we be given the option of bailing out and selling back our shares? I feel that no matter how much good I try to do, my efforts always come behind big banks, corporations and faceless companies. I've reached a point where I am fed up of trying to do the right thing frankly.”



Members and Bondholders update meeting

Triodos funding

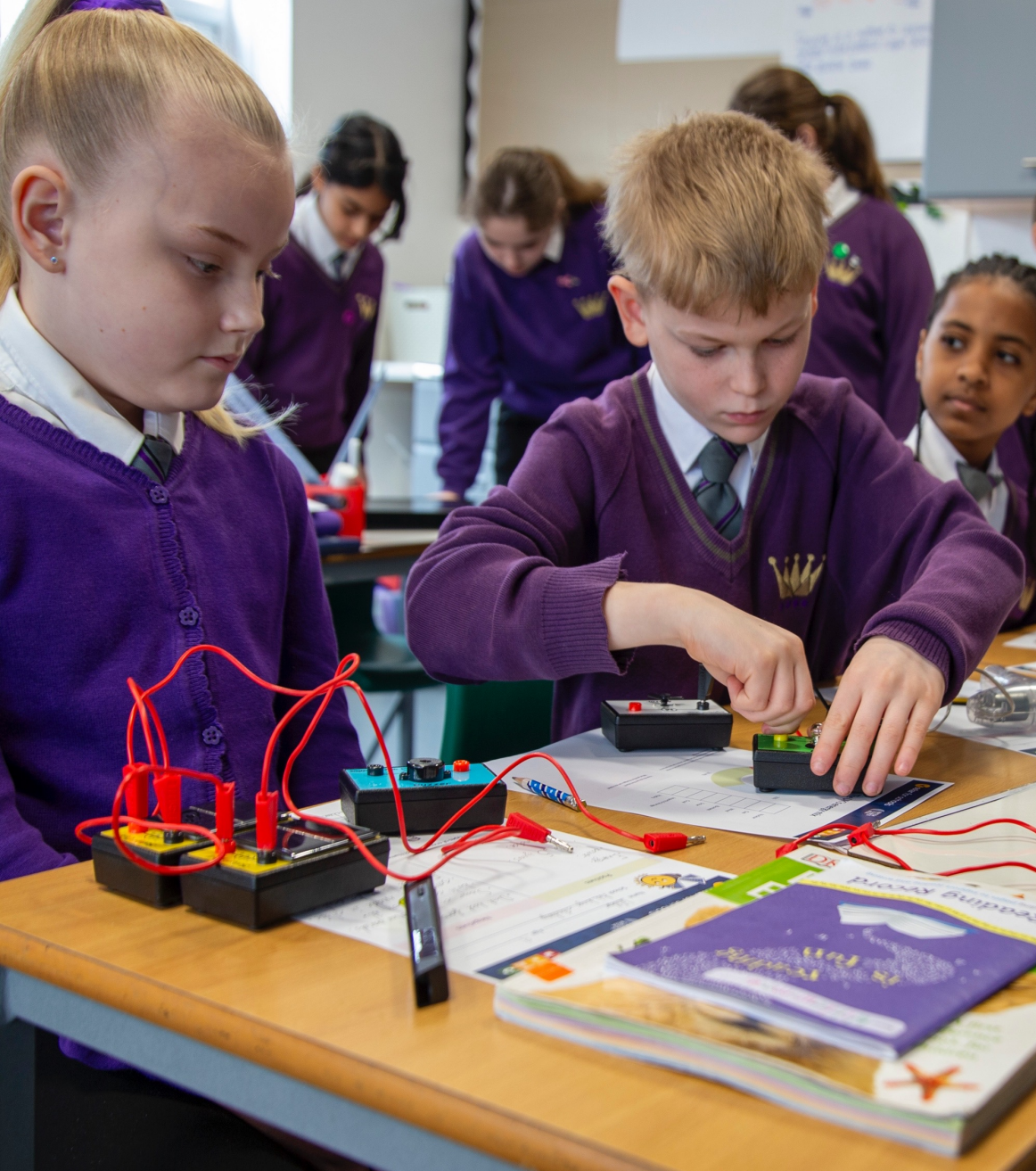
Welcome - We will record this session so we can share it with those that cannot attend.

Thank you – to all that sent in questions and feedback beforehand.

Agenda for today

- ▶ Brief Introductions
- ▶ Current status: Growth and Education
- ▶ Why more schools and thus funds
- ▶ Why long term bank finance from Triodos
- ▶ Impact to existing schools and bondholders
- ▶ Terms of the loan
- ▶ What CBS is doing to reduce risks to funders
- ▶ Q&A, discussion & next steps

**Please ask questions at any time
using the Q&A option in Teams**



Students at Ark Kings Academy Primary in Birmingham working with circuits during one of our education workshops.

Welcome and introductions.



The Solar for Schools CBS is run for its members the schools, with funding from our bondholders, all of which are invited today.



To keep up with demand from schools wanting to go solar, we are seeking to complement bondholder funds with bank debt to achieve more. Today we will discuss the reasons, benefits and perceived changes in risk to bondholders and schools.

Marino Charalambous

CBS Chair
CEO of North Star
Academy Trust



Peter Roberts

CBS Treasurer
Project Management
Consultancy Director



Robert Schrimppf

CBS Secretary
Solar Options for Schools
Founder & CEO



Sian Herschel

CBS Director
School parent and
fundraiser



Wendy Litherland

CBS Director
Ass. Headteacher,
Director Sustainability



Craig Ellin

CBS Director
LocatED, part of the
Department of Education



Nathan Odom

CBS Director
Head of Estates at
the Discovery Trust



Ann Flaherty

CBS Director
Solar Options for Schools
UK Director



► **Special Guest: Chris Cullen. Senior Relationship Manager, Triodos Bank**

Current Status: Past and present growth



~150
Schools helped
since 2016



>100
Schools waiting



5 MW
Added in 2023



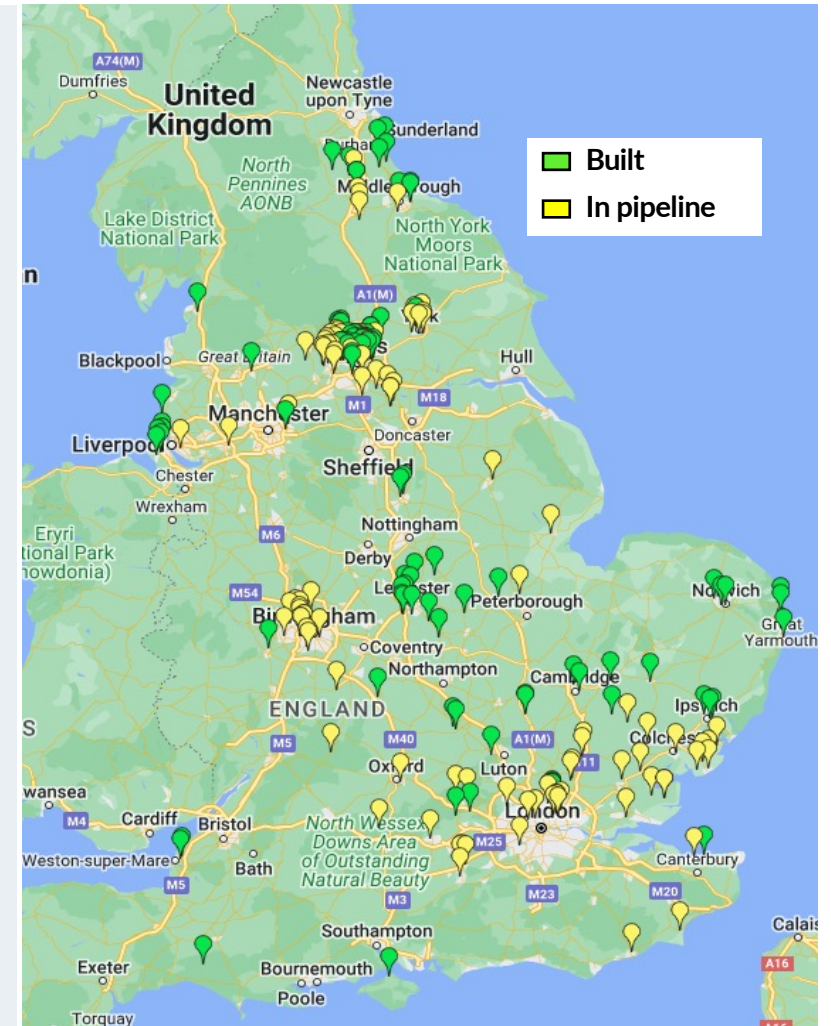
3 MW
Started in Q1



100,000+
Students inspired
so far



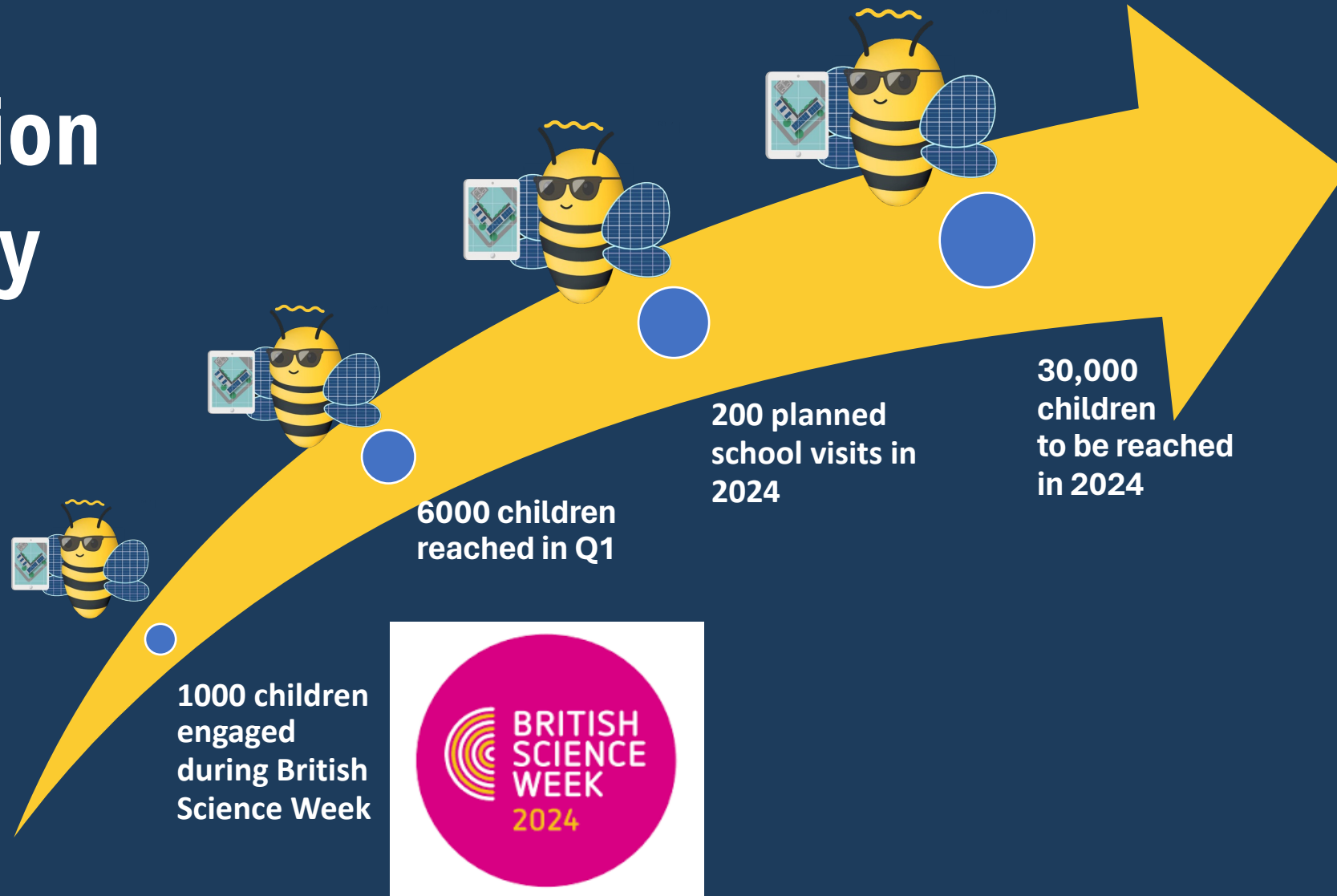
~£9m
Investment to build
waiting projects



Total schools built and in the pipeline: 250 schools

Current Status: Education acceleration

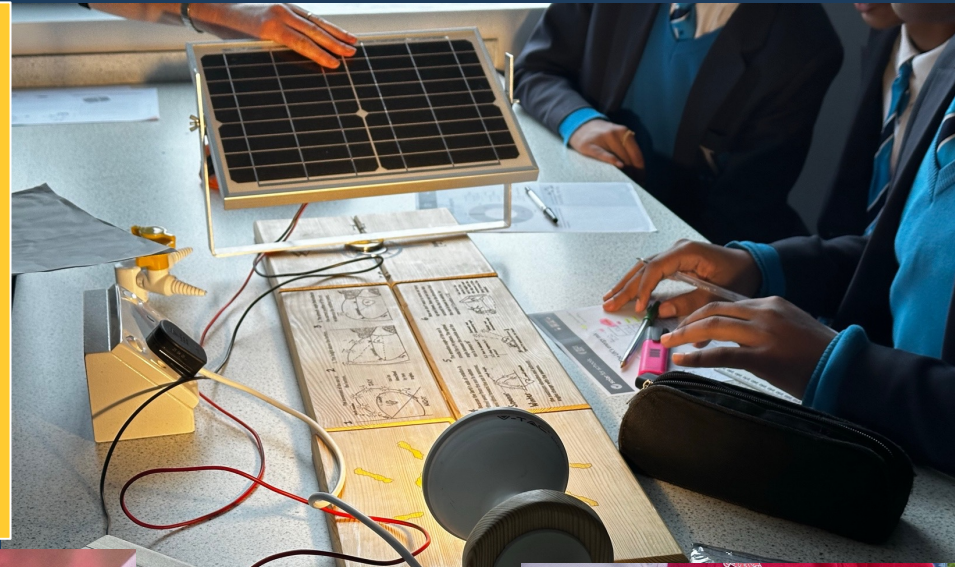
Education Delivery



Current Status: Education in Pictures

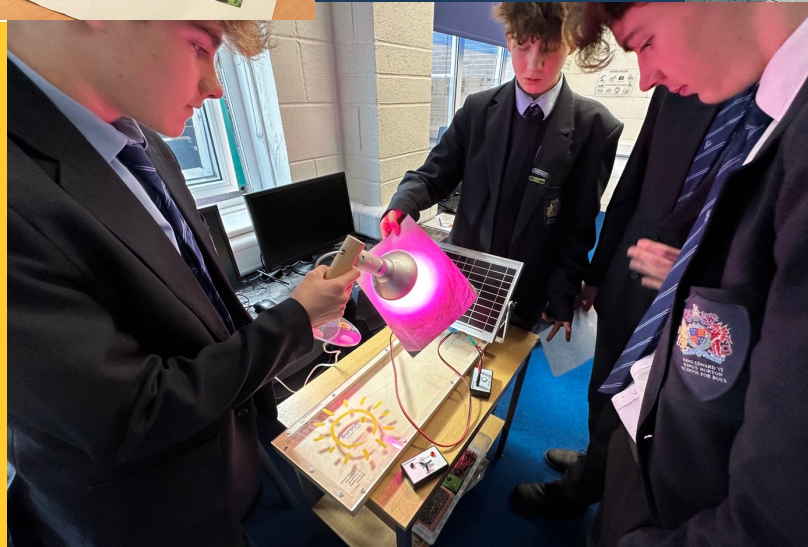


Right:
Students at Ark
Victoria
discover the
perfect angle of
solar panels
with our Solar
Explorer Kit.



Below:
Students at
Dasset CofE
Primary
School
create mini
solar panel
circuits.

Above:
Students at
Spinfield Primary
School learn how
to design a solar
PV panel system
(a paper version).



Left:
Students at
King's Norton
Boys' School
experiment
with our Solar
Experimental
Kit.



Why do we want more funds?

- ▶ More and more students and schools want to go solar, but don't have funds.
- ▶ We have over 100 schools waiting.
- ▶ The more schools we help, the more income to invest in:
 - ▶ Better monitoring and management
 - ▶ Reducing costs (technology and scale)
 - ▶ Reducing and dealing with risks effectively
 - ▶ More education development for schools
 - ▶ Better customer service for schools & bondholders
 - ▶ More funding flexibility
- ▶ More schools are therefore good for existing schools and bondholders

Thursday 14th March 2024

Dear Solar for Schools,

Please can you consider our application for solar panels to be fitted on the roof of Hendal Primary School. We are a keen and busy Eco-Council and we are extremely aware of our carbon footprint and how this contributes to climate change.

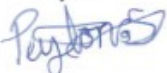
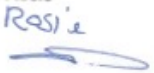



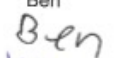



We believe that solar panels are a fantastic opportunity for us to develop our renewable energy resources. We understand that renewable means you can use it again and again and by choosing to work with Hendal Primary School you will be educating over four hundred and fifty children and staff about the benefits of solar energy. We will then be sharing our knowledge with our families and the wider community in Kettlethorpe.

We would use the energy to power our chrome books and ipads and this would also help children with special educational needs with their learning.

If we have to continue using a non-renewable source of energy we will continue to harm the environment and animals and plants may become extinct because of the greenhouse gases that are produced when using a non-renewable energy.

We think that our premises are well suited to the installation of solar panels as we have a large flat roof. We would be so proud to work with Solar for Schools and we have collected over two hundred signatures in support of our application.

Thank you for taking the time to read our application.

Peyton 	Rosie 	Matthew 	Kammy 
Amelia 	Ben 	Carson 	Emelja 
and Mrs Ashton 			

"Hendal Primary is a nurturing and welcoming school where pupils feel cared for and valued. Pupils are proud of their school and enjoy learning." "The school is truly inclusive"
Ofsted 2020

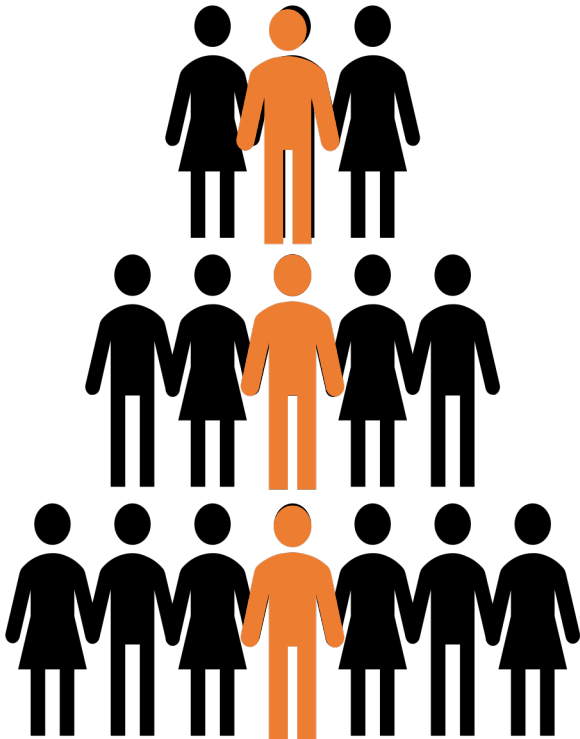
Why more schools are better for bondholders & schools



► **Economies of scale:** Volume enables lower costs, (less travel distance between schools, more efficient use of teams, more buying power etc) which can be used to reduce PPAs or increase reserves, pay back loans faster, improve monitoring and repairs, find additional revenues (EV charging) etc.

► **Risk reduction:** The impact of a single school closing is reduced, the more schools we have, even as the probability of one of the schools closing increases slightly. About 1 in 1700 primaries close each year. (typically very small ones, which we can't do anyway). Similarly with re-roofing projects, the more schools we have the better we can manage the shortfall from a single project.

► **Flexibility:** Increasing the sources and scale of funding, both in terms of the numbers of bondholders and larger scale funders such as banks, gives the CBS more flexibility in its finances to support the needs of bondholders who require their capital to be repaid early.



Why long-term loans from a bank? Bonds not enough.



- Higher market interest rates makes it harder to raise funds and still deliver savings to schools via just bonds.
- We are ramping up marketing efforts to attract more bondholders.
- Offering higher returns means less schools viable. So it is a balance.



- Bond offer VIII at 5% in March 2023 only raised £1.2m in 4 months, despite investing in advertising.
- Bond offer IX in Sept 2023 offering up to 6.5% variable (starting at 5.75%) raised £800k in ~3 months, just!
- Total raise of £2m from bondholders in 2023 and over £1m from grants, donations and school contributions.



- Bond offer X (5.5% fixed) launched directly to existing bondholders last year and now via Ethex has only raised about 50% of the £800k target so far.
- **To build all schools that are waiting, we would need about £9m in 2024, bonds alone might account for £1.5-£3m so need other sources of funding. i.e. banks.**

Why have we chosen Triodos Bank?

- ▶ Most sustainable/ethical bank in the UK ([MotherTree's Carbon Emissions Bank League Table](#))
- ▶ Have been monitoring the CBS's progress since the beginning
- ▶ Offered the most competitive and suitable terms, are our current bank.
- ▶ Have been working hard to get the CBS to be 'bankable' i.e. suitable for banks to lend to
- ▶ £20bn invested to date in sustainable and ethical businesses from nearly 750,000 ethically focused customers, who will learn about the CBS and could become additional bondholders over time.



More on Triodos' sustainability approach at the end of the slides.
[Or join then on 25th April online event.](#)

Community groups Triodos has worked with to date



None of the community-owned projects with long-term loans from Triodos have failed.

What are the terms of the loan?

- ▶ Amount: £3m initially.
- ▶ Interest rate: 2% over 10 year SONIA (Bank of England interbank rates).
+0.15% to fix rate for 10 years.
Currently about 6.2% total.
- ▶ Duration: 10 year fixed interest rate. Repayable over 15 years.

Long term Triodos could lend the CBS up to a maximum of ~50% of the total book value and a maximum £25m.

The CBS plans to fund projects by combining:

- ▶ ~50% Triodos Bank
- ▶ ~35% Bondholders
- ▶ ~15% from reserves, donations, grants & contributions (Buffer)

What will it mean to Schools?

- ▶ **Risks remain the same**

terms in agreements between schools and CBS do not change

CBS needs to move the assets to a 100% owned subsidiary and transfer the CBS's rights to the bank if, the CBS is in default.

- ▶ **Community Benefit Society can meet its objectives to help more schools to:**

- ▶ have zero-carbon low-cost solar power.
- ▶ deliver sustainability education: energy & carbon education.

- ▶ **Long-term aim to improve long-term savings with**

- ▶ access to lower cost sources of funds
- ▶ benefit from economies of scale to reduce operating cost

(Short-term surpluses will be used to deliver financial buffers for bank and bondholders: but delaying distributions to schools and re-paying the loans earlier should increase savings to schools over time).

The schools just need to consent to the CBS doing this.



Danielle, one SOFS full time educators delivering a workshop at St Margaret's, Basildon

What will it mean to Bondholders?

- ▶ **Your bonds are still unsecured**

The bank is securing its loans against the solar assets. So if CBS cannot pay creditors (bank and bondholders), the bank could take control, could sell the portfolio to another investor for less than the total outstanding debt, they would get their funds back and you may not get all of yours.

- ▶ **Less refinancing risk**

Ability to re-pay bonds as they become due

Triodos can lend up to £25m

- ▶ **Less management risk**

Bondholders are investing in a CBS considered stable enough to attract famously risk adverse banks.

This should provide reassurance to new investors that the investment is offering a competitive return for the risk and allow us to reach a wider audience of ethical investors.

Risk of failure is now lower, but losses in case of failure could be greater.



Eco Club students at King Nortons Boys School in a drone workshop

What is the CBS doing to further reduce risks to lenders?

- ▶ Growing the number of solar schools
- ▶ Gradually adding longer-term debt to the mix
- ▶ Re-paying or re-investing spare cash quickly
- ▶ Investing more in monitoring and financial reporting
- ▶ Making the financial model more conservative
- ▶ Encouraging EV charging and Heat Pump adoption in schools
- ▶ Attracting more donations, grants and contributions
- ▶ *Exploring bondholder insurance*

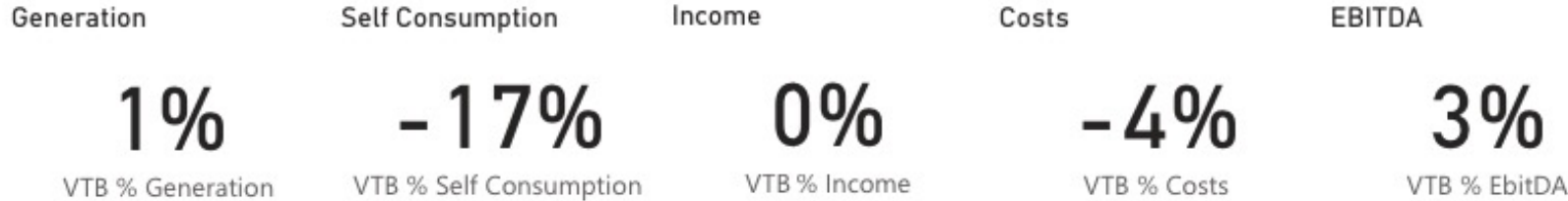
All aimed at building an equity buffer that protects bondholders

- ▶ **Buffer today: ~£2m**

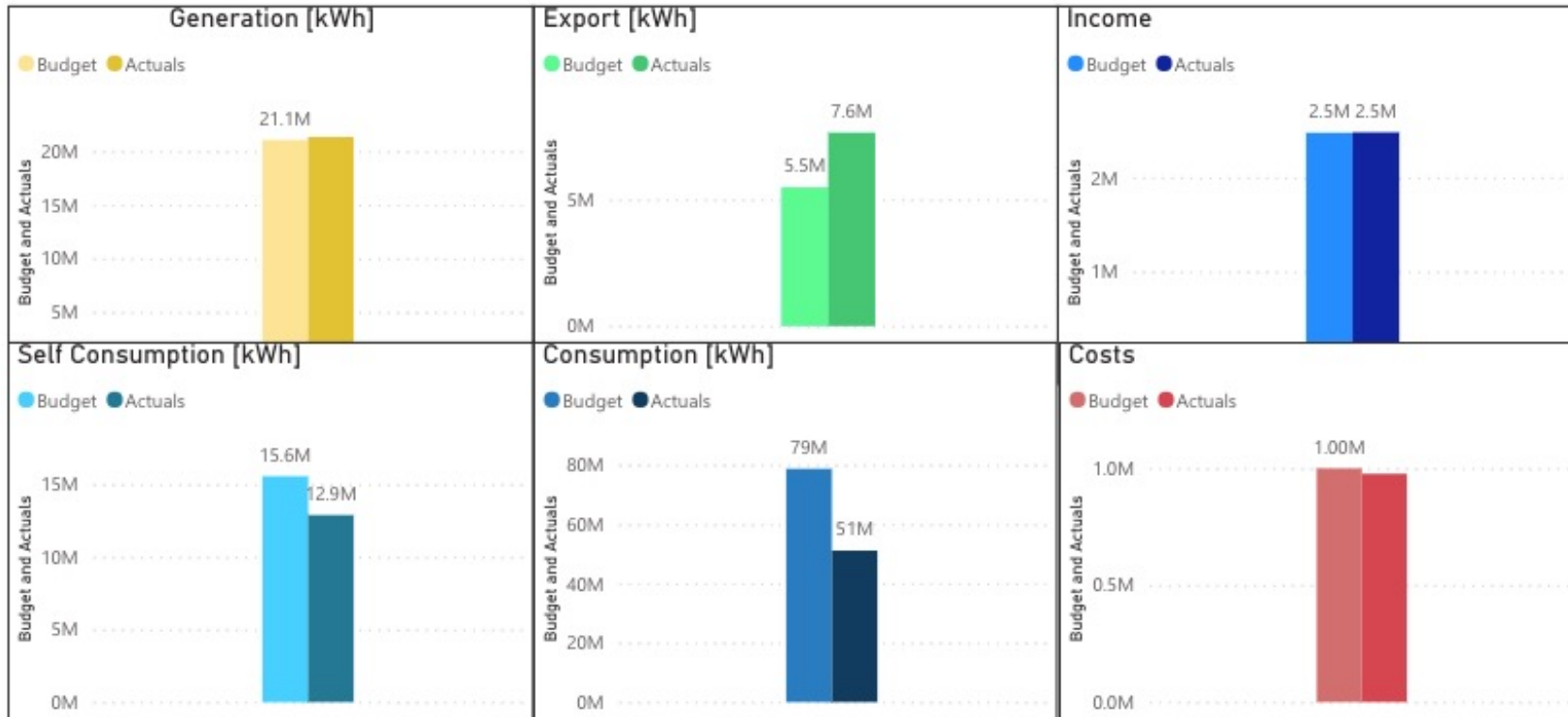


Science Week: Year 8 at King Norton Boys School during a data analysis exercise using real data from solar panels on their school.

Risk Mitigation: Financial Monitoring (Report to end Feb 2024)



Self consumption deficit has fallen from -20% to -17% and despite fall in generation surplus from 3% to 1% (particularly dark Jan/Feb), EBITDA still ahead 3%.



Size: 14145.3kWp

Contracts: 149

Going forward self consumption will increase further over the years vs, budget due to:

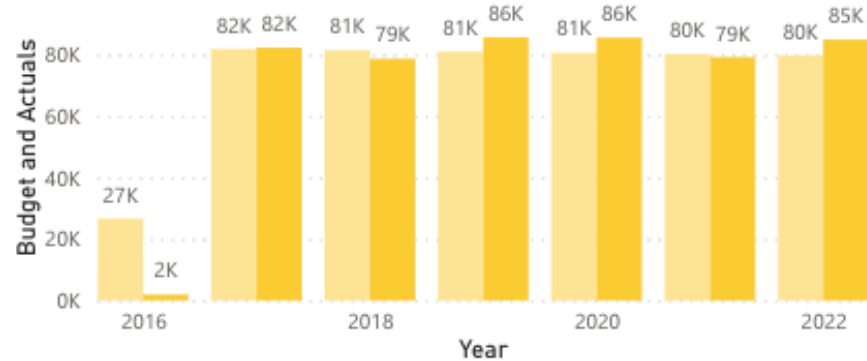
- Recent school have consumption budgets based on much lower actual consumption figures from price shock
- More heat pumps
- More EV charging

Risk Mitigation: Rising school consumption: Long term trend + EV charging and Heat Pumps

(one school as example)

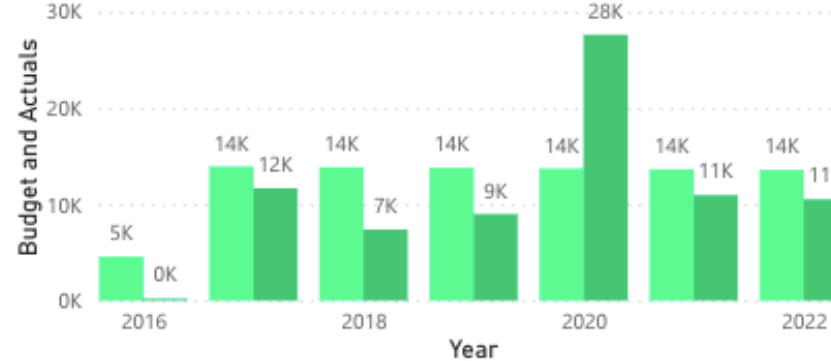
Generation [kWh]

● Budget ● Actuals



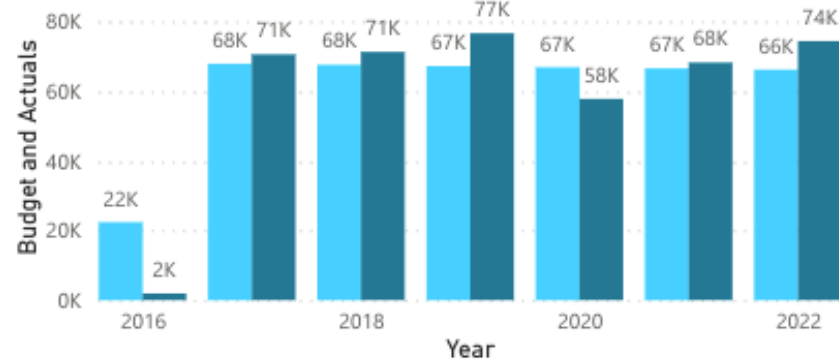
Export [kWh]

● Budget ● Actuals



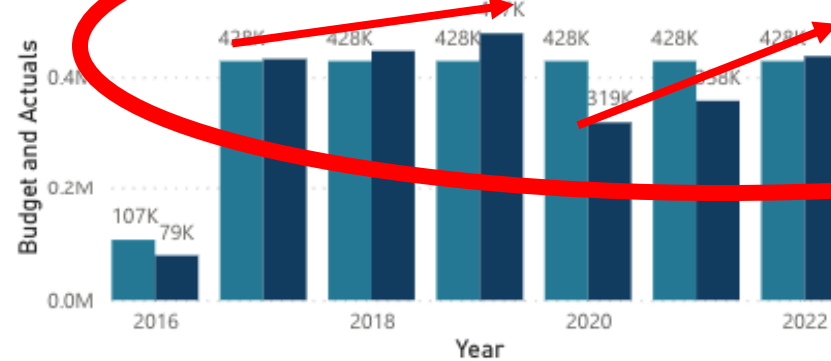
Self Consumption [kWh]

● Budget ● Actuals



Consumption [kWh]

● Budget ● Actuals

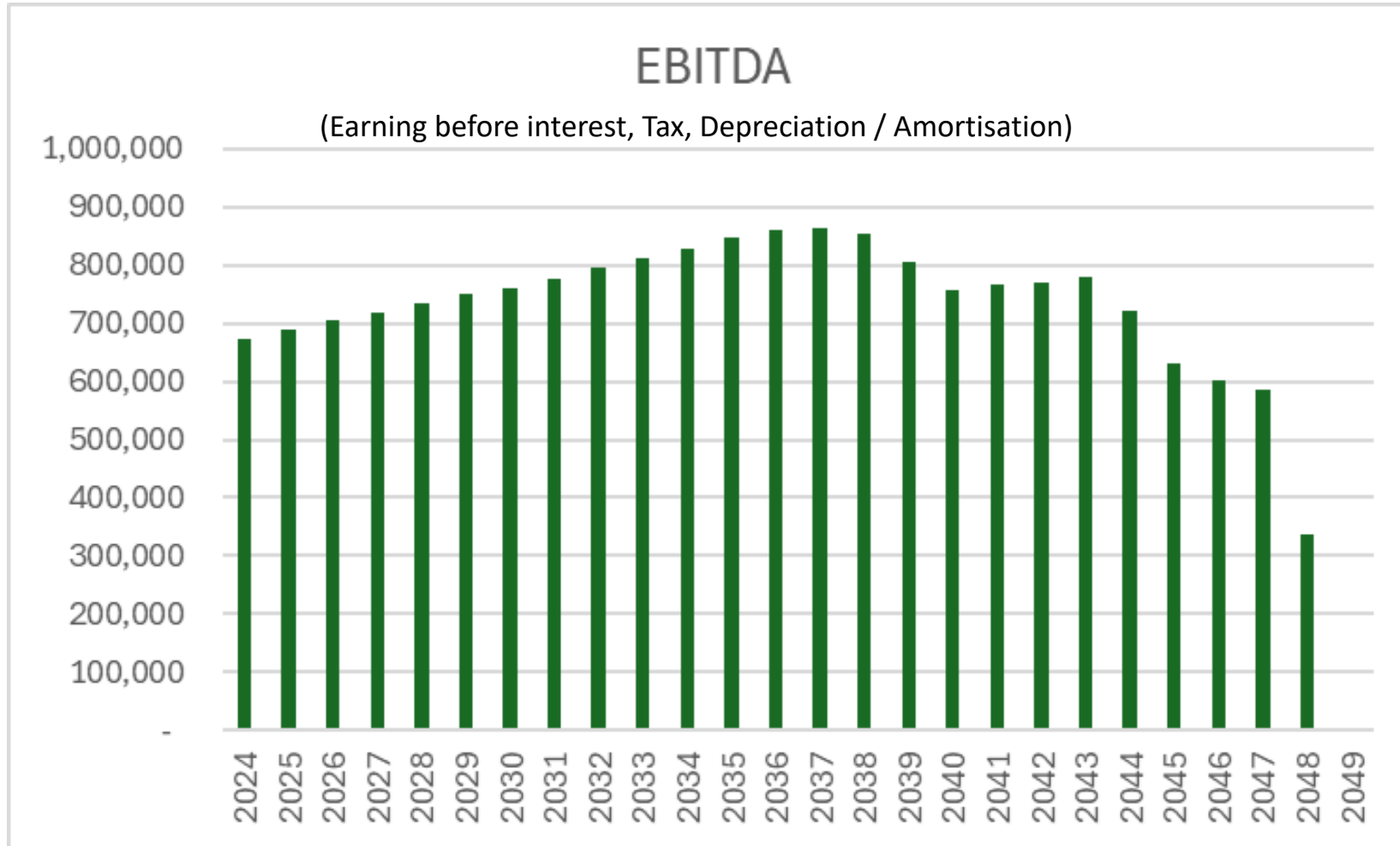


Contract

🔍 Search

- Alwoodley Primary School (115kWp)
- Archbishop Holgate's School (460kWp)
- Ardley Hill (29kWp)
- Ashfield Primary School (32kWp)
- Ashton West End (30kWp)
- Bardsey Primary Academy-Lower (43k...)
- Bardsey Primary Academy-Upper (64k...)
- Barn Croft Primary School (70kWp)
- Beechwood Primary School (129kWp)
- Belle Vue Girls Academy (460kWp)
- Benton Park School (307kWp)
- Bidston Avenue Primary (76kWp)
- Biggleswade KiteLands (30kWp)
- Biggleswade Mead (160kWp)
- Bradford Forster Academy (352kWp)
- Braunstone Community Primary (50kWp)
- Brightwalton Church of England Primar...
- Captains Close Primary (30kWp)
- Casterton College (92kWp)
- Churwell Primary School (82kWp)
- Clapgate Primary School (72kWp)
- Clayton Community Primary School (121k...)
- Clifton Green Primary School (155kWp)
- Colne Engaine Church of England Prim...
- Cookridge Holy Trinity Church of Engla...
- Danesgate Community School (28kWp)
- Dene Community - Sports Hall (29kWp)

Risk Mitigation: Value of assets vs. total net debt



Income – operating cost forecasts per year.

As of the end of Feb **£10m** invested in 14MW of solar.

Funded by:

- £6.4m from bonds
- £2m of grants & contributions
- £1m overdraft/creditors
- £0.6m re-invested cash flows

Depreciated value of assets: £9.4m

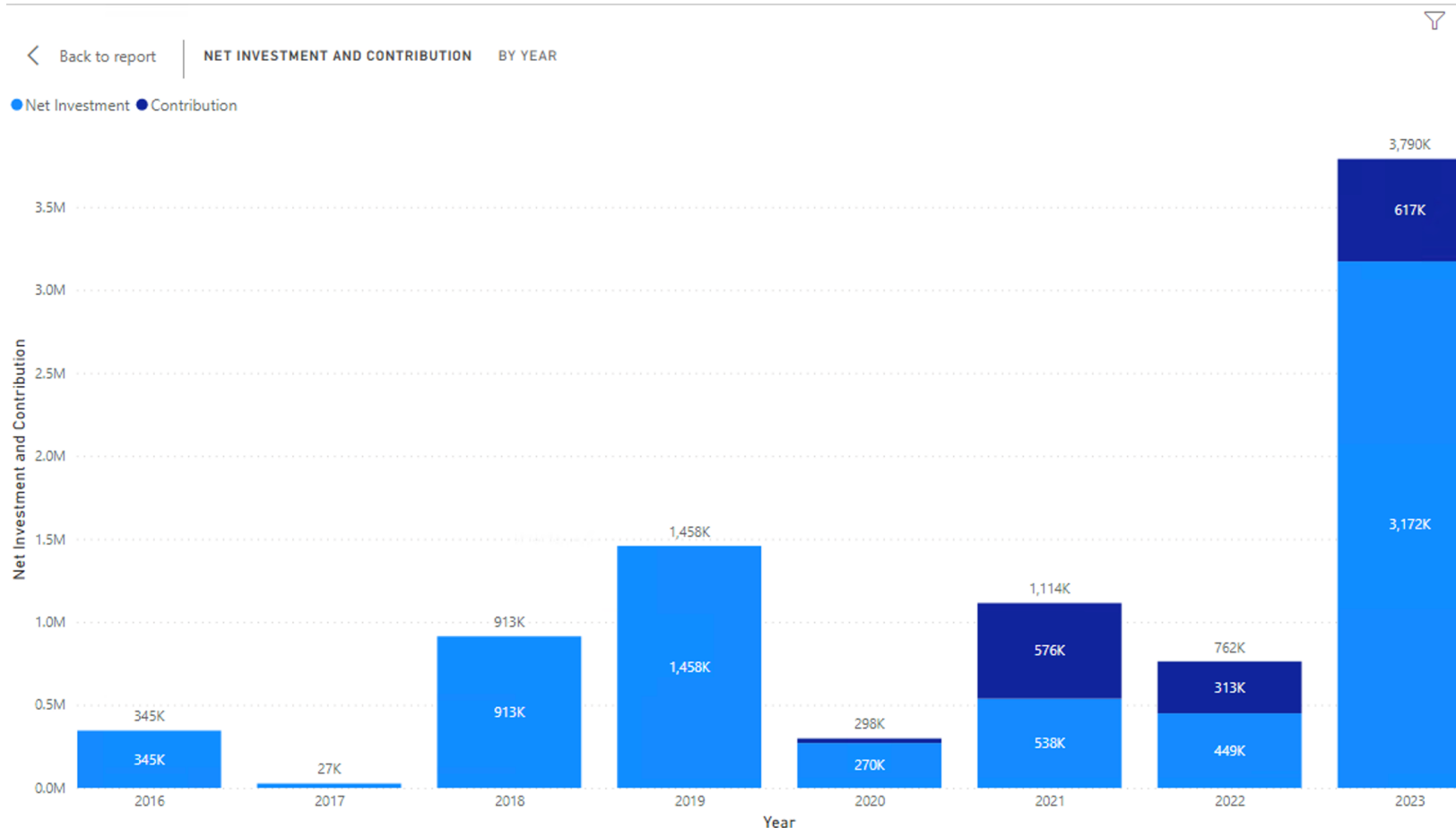
Net debt: - £7.4m

Difference/buffer =£2.0m

NPV (Net Present Value) of the solar panels remaining life, discounted at 6.2%: **£9.4m**

Could discount at 8.8% and still obtain an NPV > Net Debt.

Current Status: Donations and contributions



Since 2020 have been working harder on attracting contributions:

- Donations
- School/parent contributions
- Grants

CBS has collected nearly £2m in such contributions to:

- Reduce PPAs to schools and make projects viable.
- Reduce risk to bondholders.

In 2024 looking to attract about £2m in such contributions:

- National Grid: £0.5m a year
- Local grants
- Donations

Next steps

- ▶ Schools need to feel reassured and consent to the changes.
 - ▶ In the process of collecting the required consents to go ahead from each of nearly 150 schools over the coming months.
 - ▶ The bank will provide the first £3m once our schools have signed.
- ▶ Bondholders need to feel comfortable with the changes.
 - ▶ This session is part of that.
 - ▶ If any bondholders does not feel comfortable with their level of investment in the CBS, they should write to bonds@solarforschools.co.uk where we will include early repayments to them as part of the next years plans.
 - ▶ Equally if you can invest more, doing so means you will increase our impact further.

Further Questions?





*Thank you to all our members and bondholders.
YOU make this all possible*



Appendix 1

**Questions sent by bondholder &
edited replies**



Does bringing on a bank increase the risk of my bonds?

Depends. Many see adding Triodos who are considered the most ethical bank in the UK to our lenders, as a positive move to help schools across the UK take on a more sustainable energy source and help educate young generations about energy.

They see the fact that a bank is prepared to eventually lend up to £25m over time as a very positive sign of confidence in what we are doing. To date, none of Triodos's loans to solar community energy groups like the Solar for Schools CBS has failed. A testament to their due diligence in deciding who they lend to and their collaborating working practices if things don't go quite to plan.

So on the one hand the probability of failure is reduced (better oversight, discipline, scale from having a bank on board) but on the other hand if it still goes wrong, i.e. many many school shut down or use dramatically less electricity than they used to for long periods of time, losses to bondholders could be greater.

How much riskier are my bonds if you take on bank debt that ranks ahead of me?



This question delves into the nuanced dynamics of risk when bank debt is introduced. While providing an exact measure of increased risk is challenging.

In businesses with volatile cash flows, additional debt can amplify the risk of insolvency. For instance, consider a scenario where a restaurant heavily leverages to purchase a property, only to experience a decline in patronage, leading to potential foreclosure by the bank.

However, in the context of renewable energy portfolios, comprising numerous distributed solar assets nationwide, cash flows tend to be more stable. These assets rely on consistent sunlight, operational efficiency, and prompt payment, which we receive from our schools.

The primary risk factor revolves around potential disruptions in school operations or significant shifts in electricity consumption. We encountered such challenges during the COVID-19 pandemic and periods of volatile energy prices, which led to a notable decrease in electricity sales to schools. Despite this, proactive measures, including optimising surplus electricity sales and adjusting the model for new projects, means that the portfolio is ahead on its cash generation vs. plan.

We have also made further changes to the financial model to be more conservative about the proportion of electricity sold to schools, to deal with higher interest rates and falling inflation rates. With the assurance of long-term energy contracts spanning 25 years, reputable school counterparties, asset insurance, and the reliable solar resource, our solar portfolio presents a significantly lower risk profile compared to conventional businesses, rendering it conducive to debt financing.

Why do you state that having a bank on board lowers the risk on my bonds, if the bank now ranks ahead of me?

Adding 15-year debt as a source of finance *increases* the average maturity of the debt in the portfolio. Longer dated debt provides stability to the entity's capital structure and improves its creditworthiness. So it lowers the risk for short-term debt holders, as the overall pressure to refinance short-term debt is reduced. Put differently: There is a positive portfolio diversification effect. Also, an overall larger asset portfolio increases overall cash flows and thereby reduces the impact of any short-term problems (e.g. school failure, technical issues, short-term difficulties to raise bonds e.g. etc). Long-term debt will be used to finance more projects the cash flows of which will create more equity for the portfolio which creates more safety buffer to repay short-term debt.

Banks are extremely risk averse due to strict rules on capital adequacy ratios. They need to maintain a mandated equity buffer as a percentage of the bank's risk weighted credit exposures. Long-dated lending is typically riskier and therefore weighs more in risk ratios. Banks therefore scrupulously assess projects for their riskiness and assign internal risk ratings. Higher risk projects will not get financed, as they put too much of the bank's equity buffer at risk.

Only projects that are considered 'bankable' receive long-term finance. Bankability is jargon for a project that has long-term predictable cash-flows, low risks from a legal and technical perspective and security of offtake with creditworthy counterparties.

To ascertain bankability a long-term lender will submit the borrower to an extremely rigorous due diligence process. The bank will require a third-party technical analysis, an economic analysis, analysis of insurance and critically of all legal documents. Risks need to be very clearly identified and allocated in all contracts to ensure they are robust not only in the short term, but for the lifetime of the loan with all potential risks that may occur in the course of 15 years.

Banks margins are tight on long-term lending. Triodos will earn 2% above its cost of funding. The bank will therefore push for governance changes, improvement in legal documents to clarify risk allocation to ensure their margin and capital are protected. The requirements of the bank benefit not only the lender but also the borrower – and in this case the bond holders – by reducing project risks.

What interest rate would be paid to the bank?

The rate will be set at the time of loan agreement being signed and will be about 2% above UK 10-year interbank lending rates which are similar to the returns on 10 years UK Gilts. We will be borrowing for 15 years with the interest rate fixed for 10 years and then fixed again after the 9th year, for the last 5 years.

Given the initial costs of setting up each loan, borrowing for shorter periods multiple times is expensive. On the other hand, longer term interest rates are usually more expensive than short term rates. So, when working with a bank it is a balance between securing a low interest rate and not having to do it too often. Fortunately, it is currently cheaper to borrow for 10 years than 5 so our plan is good.

When we started discussions, it would have meant about 6.7% PA, In January it would have been 5.8% and if closed today it would be about 6.2%.

The trend is downwards, but very variable each week, but once signed, rate is fixed for 10 years.



Will we be given the option of bailing out and redeeming our bonds?

Yes, although we are not contractually obliged to re-pay early if we take on bank debt, we want to be transparent about what we are doing and don't want any bondholder to feel unhappy about their investment with us, so if anyone wishes to be re-paid early, we will make every effort possible to do so as quickly as we can and include the payment as part of the re-financing with the bank.

But we would like you to stay. We value our bondholders as an essential part of the community. The bank is only helping us achieve more and acting as a safety net to ensure we have some long-term security. We can't do it with bank funding alone.

If all our bondholders asked for all their money back early, Solar for Schools CBS would not be able to deliver the funded systems to the schools. The community benefit society was set up to help fund systems on schools, empowering the schools to adopt solar electricity.

What we would like to do is minimise the risk to bondholders and be transparent about what the bank debt means in the event that something went wrong. Please note the CBS is not in trouble. On the contrary, the fact that a bank is prepared to lend to us is a testament to our stability.



Please provide an explanation of the changes in structure and in particular what proportion of the Society's funding will come from secured and unsecured lending?

The main change to the structure is creating asset holding companies that are completely owned by the CBS, but the shares of which can be pledged to a bank as security. This enables the CBS to pledge specific groups of assets to a bank as a security and ultimately have a number of such companies, each holding solar assets and possibly funded in different ways.

The bondholders would remain bondholders in the parent company, so if one of the asset companies failed and the bank took them, other assets in other companies would be unaffected. The bank also wants the CBS to pledge security on individual assets while they are being moved to the new asset holding company. School's need to consent to both these changes as it involves the contracts between the CBS and the schools, although it does not change the school's rights or obligations, only the CBS's.

Will the interest rate paid to the banks fairly reflect the risk that they take relative to individuals, especially that they would be a preferential creditor?

That depends on your point of view. Triodos is offering their depositors about 4.5%. Deposits with a bank of up to £85k are guaranteed. But in order for those bank deposits to be guaranteed, the banks have to do a lot of compliance work and prove they are making enough returns to cover the occasional loss. Triodos basically add 2% to the long term interbank/risk free rate and charge us that plus some additional, relatively modest setup and monitoring fees. Other banks were not interested in such a small transaction and/or wanted to charge 3% above long-term interest rates, rather than 2%. So Triodos is good value compared to others and reflects their desire to invest in community groups like us and their commitment to supporting distributed small scale solar.

On the other hand, 6.2% interest to Triodos, is nearly 1% more than we are currently offering bond holders, yet Triodos depositors are getting ~4.5% or 1% less than we are paying bondholders directly. So we are currently offering bondholders about half way between the two. i.e. splitting the difference between what the bank would be paying you and what we are paying the bank.

So the question becomes, is the extra 1% I am getting as a bondholder worth the extra risk vs depositing it with Triodos? Is the social value I am creating worth the risk. Is 5.5% vs 4.5% good for me? It is actually 22% more interest per year.

Calculating the difference in risk is much harder. Arguably the bank is risk free as guaranteed up to £85k. Clearly Bonds are not guaranteed, but the probability of failure and the impact from such failure is much harder to calculate.

Finally, if we raise funds from Bondholders directly via Ethex we have to pay charges too and if we have to re-finance those bonds with new bond offers every 5 years, that has a cost as does managing hundreds of individual lenders each year. The cost to the CBS is 1% to manage the bondholders and about 4.5% every time the CBS raises money. So over a 15-year period it would be about $1\% \times 15 + 4.5\% + 3\% + 2\%$ (as the amounts we have to refinance drop over time) = 24.5% or about 1.6% a year or equivalent to about 7.1% cost to the CBS per year.

With the bank we still need to manage them and that has an initial cost of about 4% and about 0.5% per year to manage, but no additional re-financing costs so $4\% + 0.5\% \times 15 = 11.5\%$ or about 0.77% a year, bringing the total cost to the CBS to about 7% ($6.2\% + 0.77$), so not much difference in absolute costs to the CBS.



Sorry, at first reading this means the bond holders who have got you going by financially supporting Solar for Schools are put last behind a profitable bank if things go wrong - doesn't seem like thanks/loyalty to us from your end! Without us would SfS exist and been able to fund the projects it has?

We share your view and hence why we wanted to be open and invite bondholders to a meeting where they can be heard and hear what we are doing to reduce risk to funders while helping more schools.

We simply can't raise enough from individuals to keep up with the demand from schools to join the CBS, so we need to find other sources of funds to help the over 100 schools currently in the pipeline.

Solar for Schools CBS is successful. Thanks to you. Originally it was about extending the funds raised from family and friends to help schools and so crowdfunding was a natural extension as a means to enable the CBS to get going and fund solar on more schools. The original plan being to re-finance and pay back the bondholders after 5 years and then move to larger sources of funding such as banks and eventually pension funds over time.

What has become apparent is that a growing number of bondholders would like to continue to be involved and invest for many years to come. In addition it is becoming clear that combining funds from bondholders and banks, could enable both objectives to be met. We have also built strong relationships with many of you. We want that relationship to continue.

So going forward we would like to combine the two, we just need to get the balance right between funding and risks and to find ways to continue reducing the risks to bondholders, so it is still attractive for them. We are also considering allowing bondholders to switch normal 5 year bonds to indefinite legacy shares that are inheritance tax free. Some have suggested 10 and 15 years bonds or even a 23 year debentures, where interest and repayments are made each year for 23 years to match the actual cash flows of the solar assets.

Conclusion: we no longer see our schools as customers and our bondholders simply as suppliers, it is clear that we have two sets of customers to look after: schools AND bondholders.

Are you taking on too much credit too quickly?

No, our financing strategy has consistently relied on loans to fund our solar projects. We prioritise ensuring that each project generates sufficient revenue to cover operational expenses, including contingencies, and debt obligations over 23 years, accounting for potential downtime due to repairs or maintenance over the 25 year contracts. We always try and raise only what we need to fund each project.

The primary challenge lies in synchronising fund inflows from bondholders with project installation timelines. We strive to strike a balance, avoiding premature fundraising to minimise interest costs before revenue generation, while ensuring timely capital availability to pay installers on time.

The flexibility provided by a bank credit line facilitates efficient fund management, particularly in scenarios where project deployment outpaces bond issuance.

While our preference so far has been to fund exclusively through bondholders, the current pace of project expansion surpasses bond fundraising capabilities. As a result, we supplement with bank loans to meet project demands promptly. Notably, the bank has extended a short-term overdraft facility to bridge funding gaps temporarily, emphasising the need for long-term project finance or increased bondholder participation to sustain our growth trajectory. This captures the essence of our financing approach and the strategic considerations driving the balance between bondholder and bank financing.

How quickly should I withdraw my funds if I am nervous about the bank's loans?

Given the nature of the business, cashflows are very predictable in the short to midterm, so any risk of default is extremely low in the short term i.e. 1-2 years, especially as at the beginning the bank will have completed their due diligence and their funds would represent less than 1/3 of the total value of the assets.

Bondholders and grants have funded the first 12MW. The bank will initially fund the next 4MW for a total of 16MW. Over time as they continue to invest, the balance will eventually reach about half and half. Although in reality given that a lot of the projects are partly grant funded, the breakdown over time will look more like ¼ grants and contributions, ¼ bondholders and ½ banks.

So if the portfolio lost 25% of its value, the grants and reserves would be wiped out first, before any impact on bondholders. If the portfolio was worth half, bondholders would get half their money back, but that is no different to what would have happened when we first started.

To summarise: whilst the potential losses are increased by having second ranking debt, the chance of a loss is extremely low initially and we are looking at a number of options to keep them low over time with more grants and providing a buffer for our bondholders.

Finally it may be reassuring to know that **none** of the solar community energy organisations in the UK that have passed Triodos' DD diligence and have received long term debt finance from them has failed.



Do you still need my investment or are you planning to replace it with bank debt anyway?

YES! We actually want both bondholders and banks to invest together to enable us to deliver more solar power to more schools.

For every £1 you invest in bonds and grants, the bank will eventually match it with a £1 over time. Conversely for every £1 you take out, we have £2 less to invest in more schools and the purpose of the exercise was to fund more not less.

So clearly we need to make sure everybody is comfortable or it will not work and bringing on a bank would reduce our ability to help more schools, which is what the Community Benefit Society was set up to do.

We hope that the credibility and reassurance of having a bank on board will actually encourage more people to invest in bonds, not less.



Appendix 2

**Questions sent by member schools
& edited replies**



Will the change alter the rate I pay for my solar electricity?

No: the terms of your agreements are unaffected by the novation to the new Solar for Schools Projects One company.

Is there any risk to the schools/landlords with the change?

No: there is no change in the existing rights or obligations to the schools with the proposed changes. The School is simply consenting to the CBS assigning its own rights and obligations to the bank if needed. The School's rights and obligations are unchanged but we still need your consent.

Will the CBS's ability to return surpluses in the CBS change?

Slightly. In addition to the CBS directors deciding if there are enough surpluses to distribute to schools, the bank will have a view on this too and will probably encourage the directors to be more cautious and use reserves to reduce the long term loans faster, rather than distributing them to schools. The long term impact of doing this would be to increase total returns to schools, but push them into the future.



Will we still be able to buy the system back as previously agreed?

Yes, schools/Trusts and landlords can buy panels for the depreciated value, this will not change. Even if the bank steps in to secure their interest, neither the bank or any third party can change the terms of the agreement with the schools without your agreement. If the bank was to sell the assets to a third party, they too would be bound by the current agreement, the school may actually be able to buy the system back at a lower price than contractually agreed.

Why do we need to make the change?

The CBS needs to raise more funding to be able to pay for more solar on more schools. The new entity which is 100% owned by the CBS means we can give security to a bank against a loan more effectively and enables the directors to allocate surpluses to schools more fairly.

What does security mean?

It means that if the CBS failed then the bank would look to get the solar electricity payments from the schools directly to repay their loan or in the extreme case, sell its interest to a third party who would continue to operate the systems under the current agreements with schools.

Can the bank put up our PPA rate if that happens?

No. The terms of our agreements remain in place and your rate can only go up by a maximum of inflation at RPI each year, as they do currently.

Will the bank look after our systems if the CBS failed?

Yes, they will do what they can to ensure the loans are paid back, either by continuing to operate the systems themselves, appointing someone to manage them for them or selling them to someone who would continue to do so. Any new buyer would be bound by the agreement entered into by the schools, so the school would not see any changes to the terms.

What does the change mean to a school?

It means that the CBS will have funding to continue to install more solar power. The more solar power delivered the more opportunities there are to provide education to the schools and develop the programme for the next 25 years.



Why does the CBS need more schools? What's in it for existing members?

By having more members, the CBS is more robust. If a member fails and we have 1000 schools it will not have as much impact as if a school fails and we only have 10 members. It reduces risks to the CBS members from unexpected financial events. It also enables the CBS to benefit from economies of scale which will mean it can pass on more savings to each school over time.

Does the change mean more change for bondholders rather than school members?

Yes, as the bank loan is secured and the bonds are not, if something goes wrong the banks will get their loan back first, which could mean bondholders' losses were greater. On the other hand, the CBS needs to be well managed to secure a bank loan and thus by implication, less likely to fail if a bank considers them a suitable recipient of a loan. Finally, if the CBS was badly managed, the Bank would find someone competent to manage it, which could be of benefit to all.

What If the bondholders wish to pull out, will that put our agreement at risk?

The bank will enable us to re-pay bondholders as they become due and could help us re-pay bondholders early if they requested it. Clearly it would not be helpful if they all wanted to pull out, as we could not then build any more systems. Bondholders are an essential part of the community and complement the longer-term bank loans that is a safety net ensuring we can pay back the bond holders.



Appendix 3

Additional questions from meeting



Have you factored in likely energy efficiency improvements in schools such as LED lighting, sensors and controls, BMS, metering, other efficient equipment?

In the past this was an issue as many schools had not yet done LED lighting improvements before we installed solar, so was probably a contributing factor to much lower actual consumption in some earlier cases. Most schools have now done LED and we ask them, if not yet done, we reduce the budget consumption figure by 20%.

What proportion of the schools' electricity consumptions on average are covered by the PV installations - is it 100% regulated and unregulated energy ie net zero or is there a lower percentage?

It varies a lot per school, from 15% to 35% of their total actual usage in real time. i.e. the rest gets exported at times when they are not using enough. i.e. the summer. Taking the total annual usage, we do have some schools that generate as much in a year as they use in total, but this is unusual as larger systems in proportion to a school's size, tend to 'spill' more unused solar to the grid and thus means we need to charge more for what they do use to compensate for this.



What is the target debt:equity ratio (including both Triodos and bondholder debt)?

The CBS's current (End of Feb 2024) net debt (bondholders + Triodos overdraft) is about £7.4m. The current value of the assets based on either depreciated value or Net Present Value (discounted at 6.2%) is about £9.4m i.e. £2m of equity buffer.

We plan to continue building that equity buffer from donation, grants and operating surpluses so that it is always at least 15% of the total, with bonds making up about 35% and bank debt 50%.

Of the 100 schools waiting are these just EOIs or have surveys been carried out to show installations are feasible? Do S for S get involved in structural strengthening in roofs if needed for initial installations thereby increasing costs for certain schools?

All the schools have had initial feasibility studies done and a system size and solar price proposal approved by governors, so we can start detailed development process. Final signed agreements with the school and landlord (council or trust) can take months and are done in parallel to site surveys, structural survey, grid applications, planning applications and detailed design. The ones about to be built are all ready to go, the ones scheduled for later in the year are still in process of being developed / signed.

In the event of a problem why can't assets be split between bondholders and bank rather than bank taking all.

The bank would not take all, but would take its share, before the rest is split between bondholders. We could in theory only give security to the bank on some assets and not others, but this would mean they could lend less or charge a higher rate of interest. Instead the best way to protect bondholders is to run the system well and build up a buffer, such that if there was a 10% loss, the buffer would absorb the loss rather than the bondholders.

Can you expand on reasons that S for S could default or things go wrong apart from schools closure and roof repairs. What are the capital costs for repairs over the lifetime of the installations? has RAAC affected the installations?

A significant reduction in schools consumption that was permanent. Although history shows that short term reductions occur, but the long term trend is upwards and will be more so with EV charging and heat pumps. Lower solar generation from bad weather trends over many years, although here too, the trend has been improving over the last decade as the planet warms, but this could change. We have budgeted to replace the inverters twice during their lifetime, some may not need replacing at all. If modules are damaged by storms etc, they are covered by insurance and warrantied to deliver at least 80% of the original output by the end of their expected life. This decay is already factored into the model. RAAC: none of the schools have them, our structural surveyor checked every school funded by the CBS. SOFS does manage a school with such a roof for another funder and the system was moved.

Why do you need to monitor schools daily?

School perspective: Schools like to see what is happening on their site, for example if their air conditioning has been left on over night, schools can see a spike and therefore act on it. Pupils love this as do business managers and site supervisors. Reviewing the school's energy consumption using the charts provided by SOFS enables the schools to identify possible sources of wasted electricity and reduce overall consumption. The charts are also a great learning opportunity for students.

CBS/Bondholders perspective: Spotting when a system stops working is virtually impossible without monitoring as solar PV systems have no moving parts and make no significant noise when operating, so it is very easy for a system to stop working and nobody notice for months. Unless they are being monitored every day. Remotely monitoring the performance of the solar panels each day, ensures that we identify failures quickly and can start the process of fixing them immediately. We can also see long term changes or gradual reduction in performance that might indicate the need for cleaning, intermittent failures or imminent inverter failure, which can then be addressed before the losses from underperformance are significant.

Is 6.2% affordable for schools? Won't this put off a lot of schools as you said earlier?

Clearly the lower the cost of funding, the lower the solar price charged to schools to cover all costs including funding costs. Higher interest costs mean that smaller schools where economics are already tight would not see any savings or would actually have to pay more for solar. On the other hand we can't currently help larger schools at all without funding, so any funding, even if a little more expensive means we can continue to help some schools. Hopefully when interest costs fall, or we can attract more grants and donations, we can then help more of the others too.

Who receives the income from excess exported power?

The CBS receives the income from exported power. These revenues are factored into the calculation when determining what the schools will have to pay for the electricity they consume. Our model assumes that the value of exported electricity is pretty low as it is not contractually secured for the 25 years. We assume 3.5p per unit, increasing over time with inflation, but are currently collecting 2-3 times that amount, which is helping to build a buffer. One day, export may be worth next to nothing in the summer so want to be ready if that is ever the case.

If interest rates are going down and, I assume, it takes time to build a new installation, can the initial borrowing be reduced, until the rates do go down?

We are trying to help as many schools decarbonise as soon as we can, as many projects still work with the slightly higher interest rates, we should continue to build them if we can. Leaving the harder projects for later, when hopefully interest rates will be lower.

Is that 1/2 million why some of the schools have been getting a better funding to kWp ratio for the last few schools installed?

The grants help reduce the price paid by the schools and reduce the amount funded by the CBS, but the total system cost is not affected. Better kWp delivered per total £ invested, comes from lower module costs, more efficient installers and larger projects, where the fixed costs are shared across a bigger system. Can cost £1200/kWp for 30-40kWp systems on a tricky primary and around £800/kWp for large, simple systems on standing seam roofs.

You have mentioned usage of heat pumps and EVs. Any implications/thoughts on storage (e.g. batteries) systems alongside?

We are often asked about batteries. We would love to do some, but its hard in schools. Unlike your home where you would generate during the day and consume it at night, schools actually consume during the day. At the extreme case, the battery would fill up in the summer, never getting used and then empty in autumn, never being replenished in the winter. Having said that we are keen to test it in a school, funded by a donation and not bondholders, as it may be possible to make the economics work if one uses the battery to support the local grid. Equally as battery costs come down further, it may start to make sense.

Would be interesting to hear if you anticipate any problems in getting all schools to sign up? what is one refuses? or takes a long time....

Schools are notoriously nervous about signing anything. Fortunately we have very good relationships with most of them (education visits etc, help) and they are only asking to consent to the change. Not to any changes in their agreement. So there should be no reason why they would refuse the consent. But it will take time. Fortunately Triodos know this, understand this and don't require all of them to have signed before they put the longterm loan in place. As more of them complete the paperwork, Triodos will extend the loan further. So a single or few schools not signing, would not stop the transaction, but it might get them some odd looks from the school members that did sign promptly.

Other comments

Bond holder's risk is going up with the introduction of the bank.

If the Triodos loan and bonds cost about the same for the CBS it's not clear why bondholders should take more risk than Triodos for the same return. Will banks really offer long term loans at 5.5%? You mentioned that higher rates for bonds look dodgy but if bank loan rates are higher

Adding secured leverage ahead of unsecured bonds, mathematically increases the potential losses to bondholders in the event of failure in proportion to the leverage. If the bank funds half and bondholders half. The losses would be double. Yet the risk of failure is so much lower as organisations with Triodos debt have not failed. The Bank does a lot of homework before investing and only invests if it is confident that it will succeed. The bank only offers its customers 4.5% because they are insured against losses. To ensure depositors don't lose their money, banks need to make a buffer too, which is why they charge the CBS 2% more.

Surely insurance for bondholders etc just takes money away from the schools and the environment that the bonds are designed to support.

Yes. The Bondholder insurance would have a cost. That cost would be born by the bondholders benefiting from it. So insured bondholders might get 1-2% less interest than uninsured ones. On the other hand knowing the cost of the insurance is interesting too, as the insurer will have done their homework and due diligence in far more detail than a bondholder could, so should be better at quantifying risk. So the mere fact that insurance were an option, could be attractive even if bondholders choose not to take it.

Other feedback

In the email, you gave one reason as follows: "The bank will provide longer term finance (15 years at fixed rates) rather than 5 -year funding from bonds". Did you consider longer term bonds as an option? (PS I have invested in two 15 year crowdfunding bonds via Triodos and Ethex)

Triodos run a Crowdfunding platform and Bond offers on that platform, including ones for longer terms, tend to raise the funds quite quickly. So why does Solar for Schools not use that

as well as a longer term bond, a bond which offered a consistent payback over a long period would be interesting

Are there plans for bond lengths of differing lengths?

I'd be interested in longer duration bonds.

Very good suggestion. Thank you. We could offer longer term bonds. So far we have been advised that they are less popular, but given that a number of you have suggested and asked. We will look into offering a longer term bond either directly or via a platform such as Triodos or Ethex. Your feedback may also mean that the long-term inheritance tax free shares may also be of interest.



Appendix 4

Further details on Triodos Bank

Targeted action for transformation

Triodos Bank's vision on impact

This is our vision on the world and the fundamental changes in our economy and society that are needed. It guides us on our journey to reach our goal: a prosperous life for people on a thriving planet. And with this vision, we also aim to inspire change and stimulate dialogue about the transformation of our economy and society.

Where do we want to go?

We envision a world where all people have the necessary tools and resources to live fulfilling lives, while the economy operates in harmony with nature rather than against it, within planetary boundaries. This requires a fundamental change in the way our economy and society operate.

A prosperous life for people



- Just and cohesive societies
- Individual and collective wellbeing
- Vibrant cultural contexts

A thriving planet



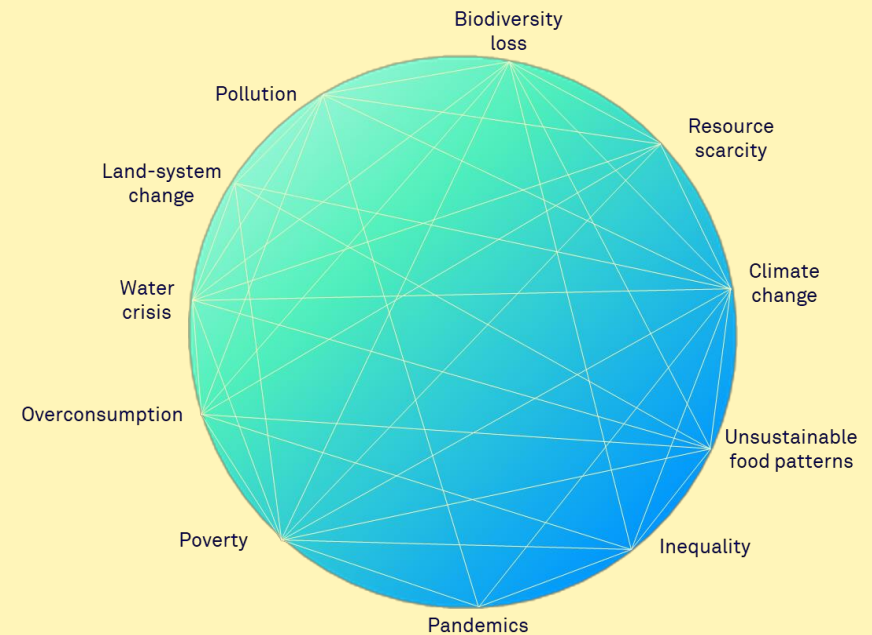
- Healthy and resilient ecosystems
- Balanced human-nature relationship
- Economies within planetary boundaries

Triodos Bank

As a values-driven financial institution we make money work for positive social, environmental and cultural change. To make sure our influence in these areas is positive we only finance sustainable enterprises, and we only use the 'real' money entrusted to us by savers and investors in the real economy.

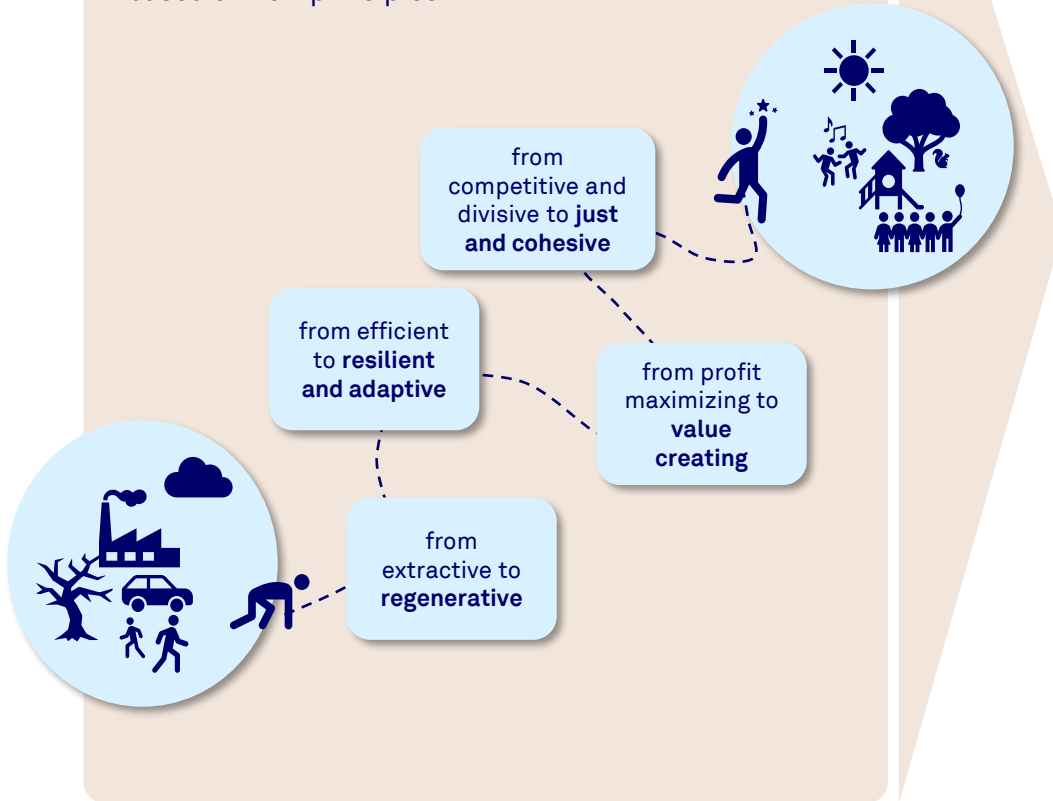
What do we see from here?

In its current state, the world is far removed from our goal. We are facing several interrelated social and environmental challenges. Flawed economic thinking has brought us where we are. The most critical task facing us today is to navigate a social and ecological transformation based on a new economic paradigm.



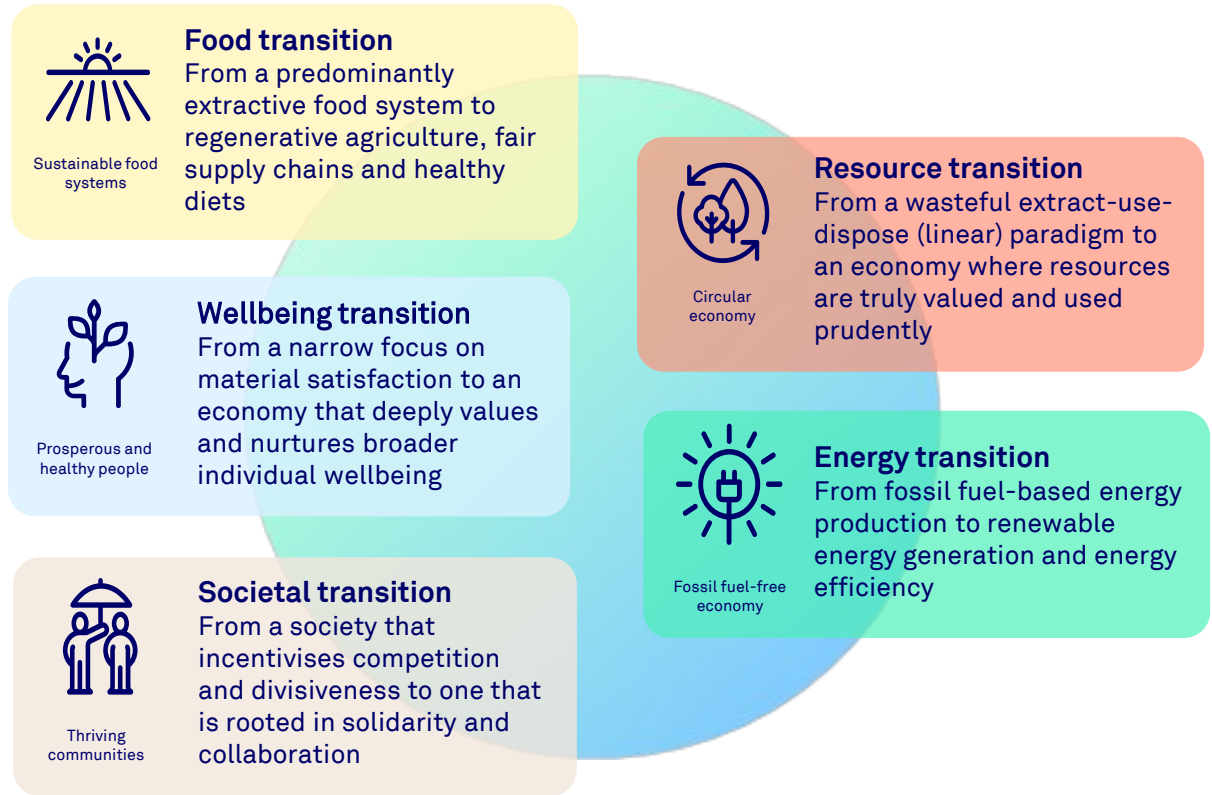
Fundamental change

The transformation we envision is only possible through a fundamental shift in our mindset and our behaviour. We must chart a different way forward to achieve a deep, systemic transformation. This requires a fundamental change in our mindset towards the way we live, produce and consume, based on new principles.



The five transitions

Systemic transformation is the result of change processes in many areas of our society and economy. These processes are called transitions: concrete societal change in practices, structures and culture. We have identified five interlinked areas of intervention, where deep changes in human systems and institutions need to take place to achieve our goal.



Together towards a regenerative and inclusive society

All Triodos' business units share the same vision on the future. We can therefore coherently make use of a broad range of tools, leveraging on the power of financial and non-financial instruments (such as advocacy) to accelerate transitions in the real economy. We finance sustainable businesses and initiatives that provide a solution to today's challenges. Besides that, we partner with others, use advocacy and influence the public debate to share ideas and best practices to truly make finance more sustainable.